2018 periodic review final determination

Overview of approach and decisions

October 2018

Contents

1. Introduction

Purpose of this document

1.1 The 2018 periodic review (PR18) is the process through which we determine **what Network Rail[1] should deliver** in respect of its role in operating, maintaining and renewing its network in control period 6 (CP6)[2] and how the funding available should be best used to support this. This feeds through into:

■ the service that passengers and freight customers receive and, together with taxpayers, ultimately pay for; and

■ the charges that Network Rail's passenger, freight and charter train operator customers will pay for access to its track and stations during CP6.

1.2 As part of PR18, **we have also developed our approach to how we will regulate Network Rail's delivery over CP6**, including the incentives to encourage it and train operators to perform well and the financial framework for Network Rail.

1.3 Our final determination sets out our overall decisions in these areas. It reflects our consideration of stakeholder views on our draft determination, on which we consulted in June 2018. It also takes account of further work done by Network Rail in response to our draft determination proposals regarding the routes in England & Wales. This document provides an overview of these decisions.

1.4 Alongside this document, we have published separate high-level summaries of our main decisions for each of England & Wales and Scotland.

1.5 Our decisions take the form of separate decisions for England & Wales and for Scotland, reflecting legislative requirements and how Network Rail is funded. These decisions also reflect the new arrangements for enhancements decision-making and funding, whereby these projects are specified by funders, outside of the periodic review process.

Background and structure

1.6 We began PR18 in May 2016 with our initial consultation document. Among other things, this set out our proposed aims and objectives for the review. These reflected where we thought PR18 could add most value, in terms of discharging our statutory duties and, in particular, supporting Network Rail's delivery for passengers and freight customers. We also sought views on our proposed high-level approach to delivering

---

[1] All references to Network Rail in this document are to Network Rail Infrastructure Limited.

[2] CP6 will run from 1 April 2019 to 31 March 2024.

our PR18 aim and objectives and then confirmed these in our November 2016 [conclusions](). Our PR18 aim and objectives are set out in Figure 1.1 below.

Figure 1.1: PR18 aim and objectives

Aim	A safer, more efficient and better used railway, delivering value for passengers, freight customers and taxpayers in control period 6 and beyond
Objectives	To establish a framework that encourages Network Rail to: (i) ensure the ongoing safety of the network; (ii) improve the efficiency of operating, maintaining, renewing and enhancing each of the routes in CP6 and beyond; and (iii) improve its understanding of the capacity and performance of the network. To support government funders and operators to make better informed decisions about expansion and use of the network.

1.7 As set out above and illustrated in Figure 1.2 below, our final determination brings together two distinct strands of work which make up PR18:

■ determining what Network Rail should deliver to customers for the funding available in CP6; and

■ establishing the framework for regulating Network Rail's delivery in CP6.

Figure 1.2: The two key strands of the PR18 determination
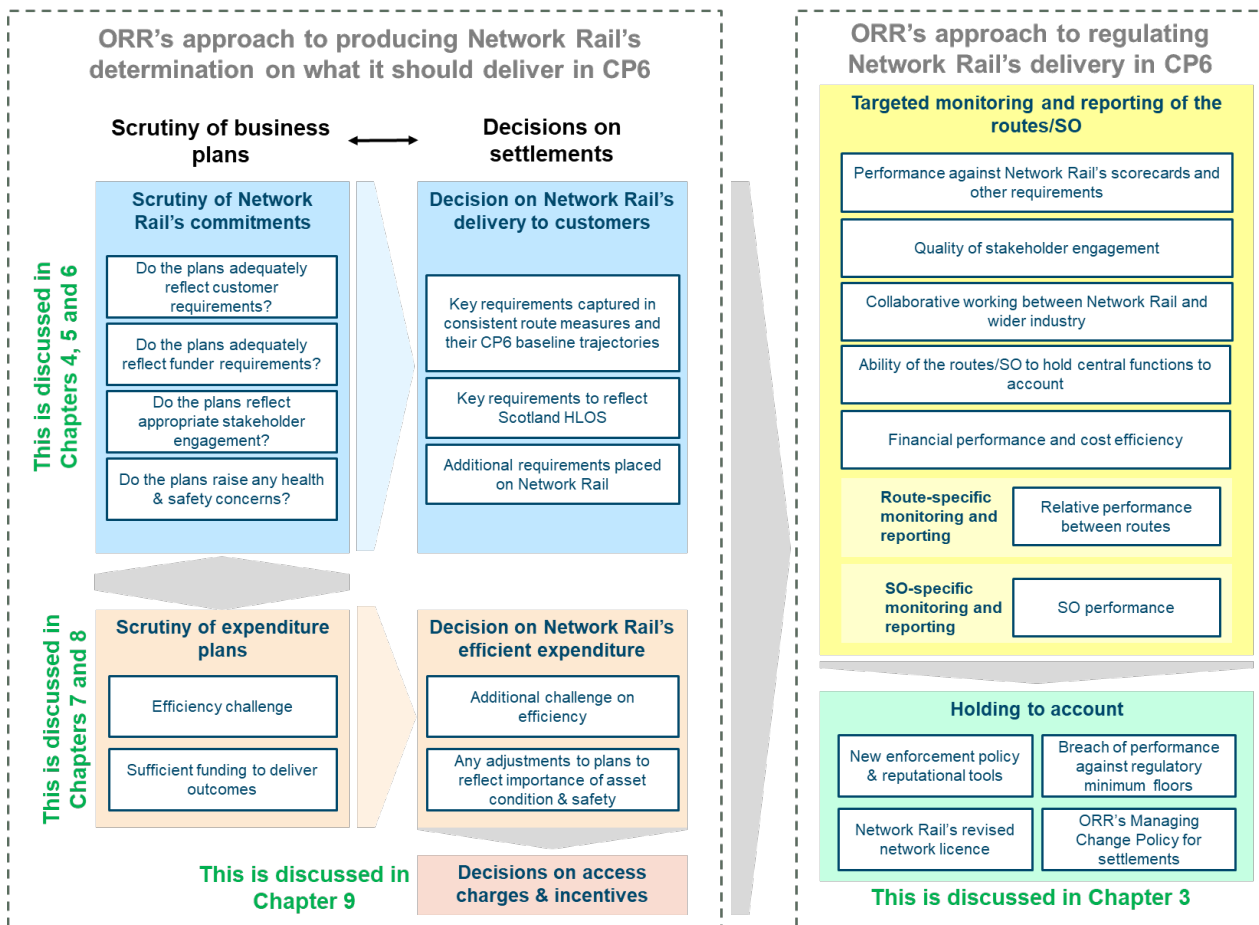
1.8 This document is structured as follows.

- ■ Chapter 2 discusses the approach to producing our determination on what Network Rail should deliver for its customers in CP6.

- ■ Chapter 3 discusses our approach to regulating Network Rail's delivery in CP6, including how we will monitor its delivery and hold it to account in CP6.

- ■ Chapters 4 to 7 summarise:

  - – our review of Network Rail's strategic business plans (SBP) for CP6 and the further work Network Rail carried out over the summer of 2018; and

  - – our decisions relating to what Network Rail should deliver with its available funding.

  Specifically, they cover our assessments of:

  - – the stakeholder engagement undertaken by Network Rail's routes and the System Operator (SO) in developing their plans for CP6 (chapter 4);

- what Network Rail proposed to deliver in CP6, including whether this meets its customers' requirements and the requirements of the high-level output specifications (HLOSs) set by the Secretary of State and the Scottish Ministers (chapter 5);

- health and safety issues relating to the SBP and what Network Rail proposed to deliver in CP6 (chapter 6); and

- Network Rail's forecast costs and income in CP6 (chapter 7).

- Chapter 8 summarises the financial framework for CP6, which will apply to Network Rail and its devolved routes and functions. It also includes our assessment of whether the HLOSs are affordable within the funding made available by the Secretary of State and the Scottish Ministers in their statements of funds available (SoFAs)[3].

- Chapter 9 provides an overview of the process that we have followed to develop our decisions on access charges and contractual incentives for CP6, and summarises our decisions on infrastructure cost charges and on capping/phasing-in increases to the variable usage charge.

- Chapter 10 sets out the next steps in PR18 following the final determination.

- Appendix A provides an overview of Network Rail's routes and key functions.

1.9 As well as this overview document, our final determination is formed of a suite of **supporting documents**, including:

- **supplementary documents** that provide more detail on:

  - particular aspects of our review of Network Rail's SBP and the further work carried out by Network Rail since the draft determination; and

  - elements of the policy framework for CP6, including documents setting out:

    - our decisions on **infrastructure cost charges**;

    - our decisions on the **capping/phasing-in of increases in the variable usage charge**; and

    - our **review of Network Rail's network licence** that sets out our proposals for revisions to Network Rail's network licence in CP6;

---

[3] An overview of the HLOS and SoFA process is included in our 'Live timetable for PR18 and description of key milestones' document, available here.

- **settlement documents** discussing the settlements we have set for each of the routes in England & Wales, the Freight & National Passenger Operator route (FNPO) and the SO. Our summary for Scotland sets out the detail of the settlement for the Scotland route, including our decisions in respect of the HLOS requirements of the Scottish Ministers. This reflects that the Scottish Government is a specifier and funder of rail services;

- a document summarising the key points raised by stakeholders on our draft determination and our response to these (the consultation responses are also available on our website);

- our grading of Network Rail's SBP, which we committed to publish in our February 2017 SBP guidance;

- a document setting out how ORR's Managing Change Policy[4] will work during CP6, where changes are proposed relative to the CP6 settlements. This will be published in November 2018; and

- ancillary documents, including impact assessments and a glossary.

1.10 The final determination documentation suite is set out in Figure 1.3 below, with embedded links to each document.

1.11 Shortly after the publication of this document, we will publish some further reports (or summaries of reports) by independent consultants and independent reporters, whose work has informed our final decisions. These, along with reports we commissioned previously for PR18 are, or will shortly be, available here.

1.12 Furthermore, we will shortly be issuing an updated version of our design framework for CP6 (this is discussed below). The design framework sets out in summary form the key aspects of the framework for regulating Network Rail's delivery in CP6 and will reflect any changes from the version we issued following the draft determination. We will also shortly publish a consultation on our approach to assessing the quality of Network Rail's stakeholder engagement in CP6.

1.13 A map of our earlier consultations and conclusions in PR18 is available here. We have also published the stakeholder comments we received on the SBP, which helped to inform our review ahead of the draft determination.

---

[4] It will be available here. We expect this policy to be referred to in Network Rail's network licence as part of the changes we plan to make later this year. This will mean that Network Rail must not make a 'Relevant Change' unless it complies with the Managing Change Policy.

Figure 1.3: The final determination suite (includes weblinks)

PR18 final determination overview document	
England & Wales summary	PR18 draft determination consultation – summary of comments and our response

		Supplementary documents	
Scotland summary (and settlement details)			
Settlement documents		**SBP assessment**	Scorecards and requirements
FNPO route			Health & safety
System Operator			Review of NR's proposed costs
England & Wales	Anglia route		Other single till income
	LNE & EM route		Stakeholder engagement
	LNW route	**Policy**	Financial framework
	South East route		Review of network licence: conclusions from consultation
	Wales route		Overview of charges & incentives decisions
	Wessex route		Infrastructure cost charges conclusions
	Western route		Variable usage charge conclusions

Other documents	
Glossary	Managing Change Policy
Consultancy & reporter studies	Grading of Network Rail's route and System Operator strategic plans for CP6

Price base

1.14 All monetary amounts in the final determination document suite are in 2017-18 prices, unless otherwise stated. Totals may not sum due to rounding differences.

Implementation of PR18

1.15 Following the publication of the final determination in October 2018, we will begin the formal implementation process for PR18. This will involve publishing legal 'review notices' in December 2018 setting out the proposed changes to relevant access contracts needed to give effect to the determination. We also expect to commence the statutory process to modify Network Rail's network licence at this point.

1.16 In preparation for this, in July 2018 we consulted on:

■ proposed changes to access contracts that would give effect to the decisions set out in the draft determination[5]; and

■ proposed changes to Network Rail's network licence, linked to our wider review of the network licence[6].

1.17 We will take account of the responses to both consultations before confirming the final drafting that we will include in the review notices and statutory licence consultation in December 2018. Further detail on the process for amending access contracts to implement the periodic review is set out in Appendix B of our July 2018 consultation (available here). This includes the process for Network Rail to decide whether to exercise its statutory right to object to our decisions in the final determination, the deadline for which will be 7 February 2019.

1.18 Alongside the publication of our review notices, Network Rail will publish its CP6 price lists for track access and station use, setting out the specific amounts that train operators will pay. It will publish the document setting out infrastructure cost charge traffic baselines in July 2019.

Delivery plan notice

1.19 On 29 October 2018, we issued a notice setting out our requirements for Network Rail's delivery plans for CP6. Please see chapter 10 for further details on this.

Monitoring and enforcement policy

1.20 We will shortly consult on changes to our policy on monitoring and economic enforcement to reflect the framework for regulating Network Rail's delivery in CP6 against its network licence[7]. This will build on the approach set out in the final determination in terms of how we will monitor Network Rail's performance at route and SO level. The consultation will also seek views on the use of reputational incentives and a risk-based approach that reflects route devolution.

Enhancements in CP6

1.21 In June 2018, we issued a draft document called 'Enhancements in control period 6: Roles and responsibilities' (available here) and invited comments on this. The consultation reflects the shift to a 'pipeline' approach to enhancements by Department for Transport (DfT) and Transport Scotland and that enhancements in CP6 will be treated differently to operations, maintenance and renewals expenditure.

---

[5] 'Implementing PR18: consultation on changes to access contracts', ORR, July 2018, available here.

[6] 'Network Rail network licence review – consultation on draft network licence', ORR, July 2018, available here.

[7] When published, the consultation will be available here.

We are carrying out further engagement on this ahead of publishing a finalised version prior to the start of CP6.

Next steps and process for the remainder of PR18

1.22 Chapter 10 discusses further work relating to PR18 that will take place following the final determination. However, the remaining high-level milestones for PR18, ahead of CP6 are set out in Table 1.1.

Table 1.1: Timetable for the remainder of PR18

Date	Milestone
November 2018 to April 2019: Implementation	
November 2018	We publish a consultation on our enforcement policy for CP6.
November 2018	We publish our Managing Change Policy.
November / early December 2018	We publish a consultation on the implementation of infrastructure cost charges.
20 December 2018	We publish our review notices, setting out the changes to access contracts needed to implement our final determination. We begin a statutory consultation on modifications to Network Rail's network licence.
20 December 2018 (or around that time)	Network Rail publishes its price lists for CP6, setting out the specific access charge rates that would be payable by train operators.
By 7 February 2019	Network Rail decides whether to accept or object to our review notices. If it accepts, we will then give train operators 28 days in which to terminate their access contracts (should they wish to do so), as required by law.
By 15 March 2019	We issue our 'review implementation notices', confirming that the review will be implemented on 1 April 2019.
March 2019	Network Rail publishes its delivery plan, including its trajectories for all CP6 scorecard measures following our final determination.
March 2019	We publish Network Rail's revised network licence, following completion of the statutory consultation. We also confirm and publish our enforcement policy for CP6.
March 2019	We publish the final version of our document 'Enhancements in control period 6: Roles and responsibilities'.
1 April 2019	CP6 begins. Changes to track and station access contracts, including new access charges, and Network Rail's network licence, take effect.

2. Approach to producing Network Rail's determination for CP6

Overview

This chapter discusses our approach to determining what Network Rail should deliver for its customers and other stakeholders in CP6.

2.1 As discussed in chapter 1, PR18 is the process through which we determine our expectations of what Network Rail will deliver in CP6, in compliance with its network licence. It is one part of our ongoing regulation of Network Rail and provides valuable certainty to Network Rail, the wider rail industry, passengers and freight users about what the company will deliver and the funding available to it over the five-year control period from 1 April 2019.

2.2 This chapter explains our approach to **how** we have arrived at this determination. This is illustrated in Figure 2.1.

2.3 This determination is different from those in previous periodic reviews and reflects some wider changes to Network Rail, in particular:

- it is the first review to take place after Network Rail has been reclassified as a **public sector body**. This has led to it being subject to much closer control by governments on its spending, which has also meant that Network Rail is no longer able to raise new finance on its own account. As such, the funding available to it is effectively fixed; and

- it seeks to reflect and support the **devolution of responsibilities within Network Rail**, which has led to the creation of more distinct route businesses (that are now responsible for more of the decisions that affect their local customers and/or

Figure 2.1: Our approach to producing Network Rail's determination on what it should deliver in CP6
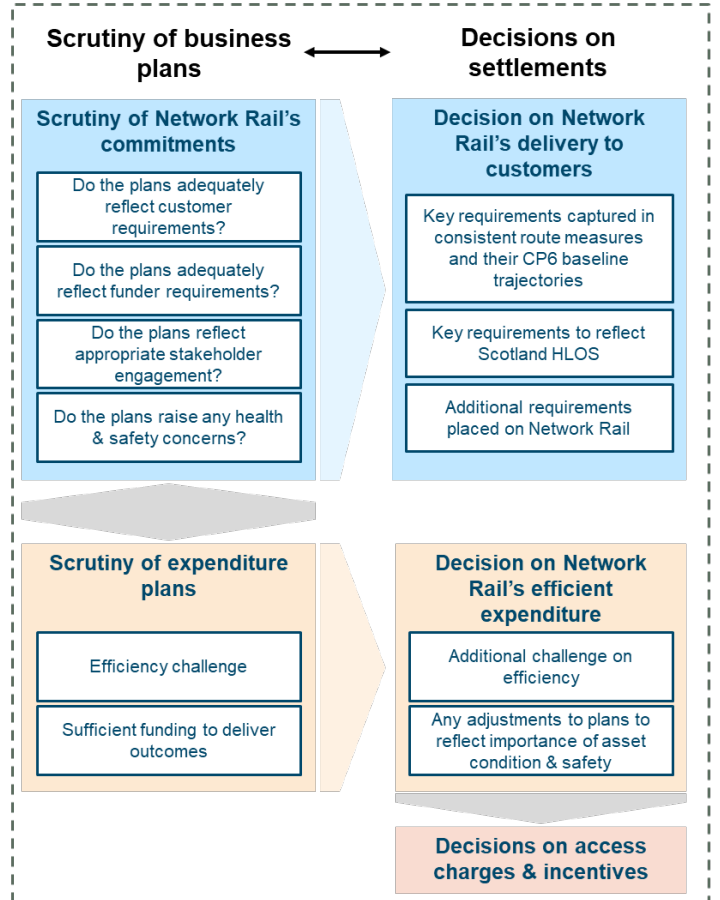
funders) and the establishment of a distinct SO (whose functions centre around maintaining the benefits of having an integrated national network).

2.4   The rest of this chapter discusses:

■   Network Rail's SBP and the approach we took to scrutinising it; and

■   an outline of the decisions arising from this scrutiny, including where references to these are discussed in the rest of this document.

Network Rail's plans and our approach to scrutinising them

2.5   A particular focus of periodic reviews is to scrutinise the SBP prepared by Network Rail. For PR18, we have focused our review on the strategic plans prepared by each of the following business units:

■   the eight geographic routes, which are responsible for maintaining, operating and renewing their respective areas of the network;

■   the FNPO, which represents the interests of freight and national passenger operators that operate across a number of geographic routes; and

■   the SO, which is responsible for working across the network in leading long-term strategic planning, managing changes to the network and producing the timetable.

2.6   Appendix A provides an overview of Network Rail's structure.

2.7   Reflecting the wider changes to Network Rail discussed above, our scrutiny sought to address two high-level aspects:

■   **what Network Rail will deliver to its customers (principally passenger and freight train operators) in terms of outputs (e.g. levels of punctuality of train services)**. We looked at whether Network Rail's plans set out appropriate, credible and sufficiently challenging targets for what it will deliver through its routes/the SO over CP6. As part of this, we considered whether the plans adequately reflect the HLOSs for England & Wales and for Scotland, as well as the extent to which they meet the needs of train operators, passengers and freight customers. We also considered whether they would support continued safe operation. Crucially, and given that Network Rail's overall funding is effectively fixed, we considered whether the plans made appropriate trade-offs between often competing priorities, including between maintaining the network,

renewing it to raise asset condition and spending to raise performance levels delivered to passengers and other end users in the near term; and

■ whether spending plans are realistic and justified (i.e. whether its expenditure is efficient). We also considered whether the plans contain a sufficient degree of stretch in terms of improving efficiency and (as required by the Railways Act 1993) whether there are sufficient funds available (in the SoFAs) to deliver the requirements of the HLOSs (our 'affordability assessment').

Scrutiny of Network Rail's commitments

Do the plans adequately reflect customer requirements?

Do the plans adequately reflect funder requirements?

Do the plans reflect appropriate stakeholder engagement?

Do the plans raise any health & safety concerns?

Scrutiny of expenditure plans

Efficiency challenge

Sufficient funding to deliver outcomes

2.8 Drawing on the evidence we used to inform our assessment of the plans, we have also graded Network Rail's route/SO plans, assigning a numerical score between 0-5 with respect to six aspects of the plan (e.g. the quality of the stakeholder engagement used to inform the plan, the extent to which the scorecards met our expectations). This enabled us to compare the quality of the plans and to recognise high quality plans, or elements of plans. The grading results have not, in and of themselves, informed the routes'/SO's settlements. Rather, they are intended to promote further improvements to Network Rail's business planning, including by providing feedback to the route/SO in their approach to developing plans.

2.9 Figure 2.2 below summarises our approach to how we scrutinised the business plans.
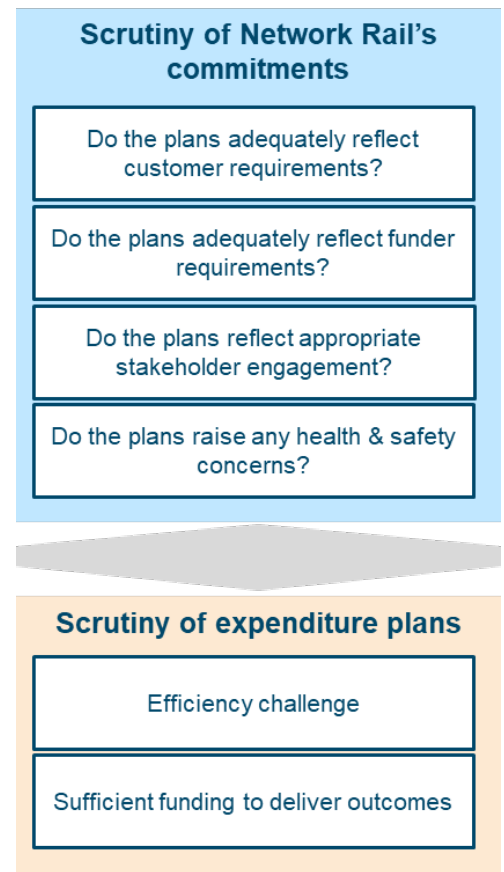
Figure 2.2: Our approach to producing Network Rail's determination
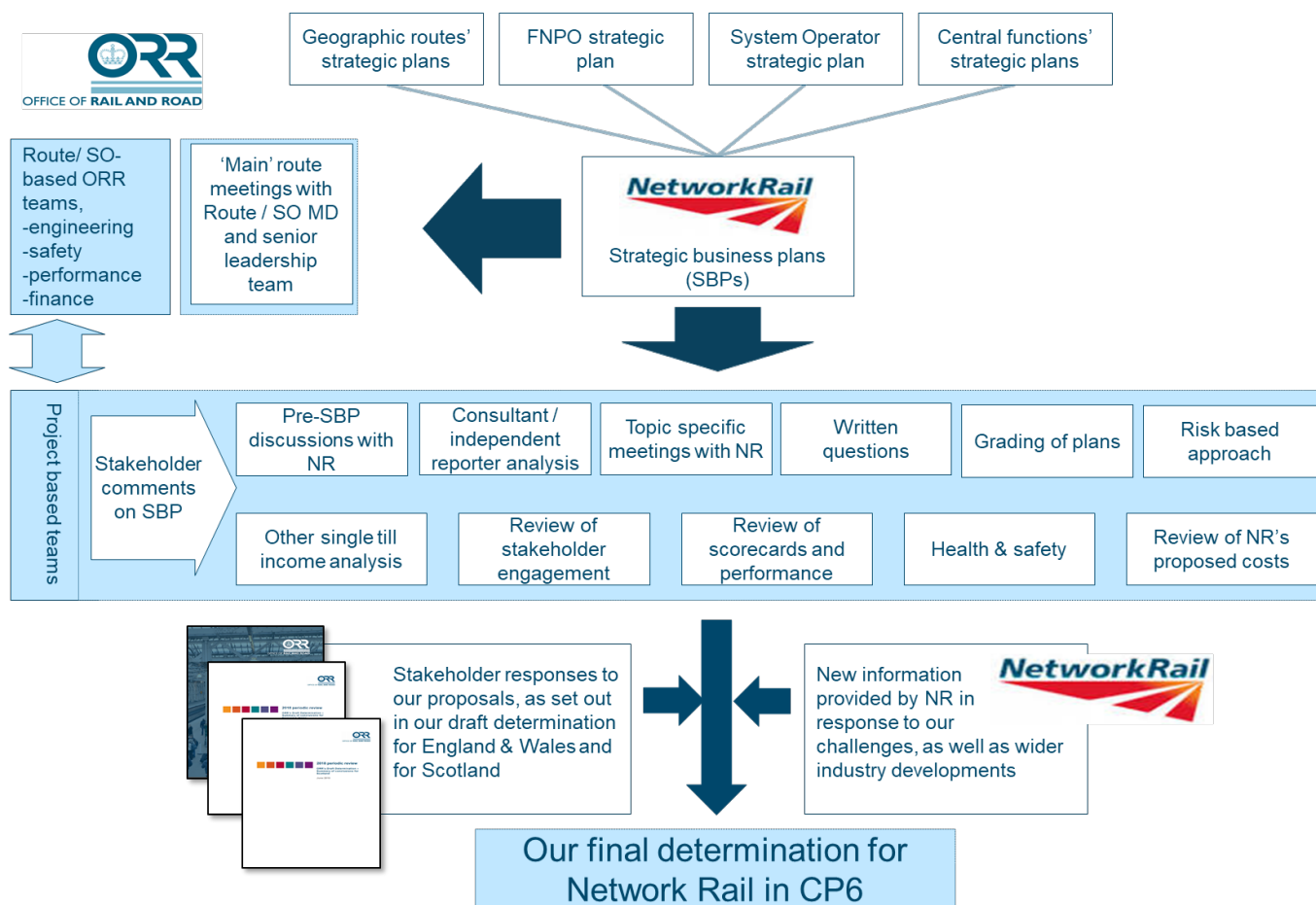
An outline of our decisions on the route and SO settlements arising from this scrutiny

2.10   In PR13 we set a framework of regulated outputs, indicators and enablers for CP5[8]. In light of wider industry changes discussed above, we have adapted our approach in PR18 for CP6, the key aspects of which are discussed below and summarised in the figure below.

Our decisions on Network Rail's delivery to customers

2.11   We have set out the performance levels that we expect each route to work to deliver in the form of CP6 baseline trajectories for each routes' contribution to passenger and freight train performance. These baselines are for the consistent route measure for passenger performance (CRM-P, which captures a route's contribution to the delays experienced by passengers) and delays experienced by freight services (as measured by the freight delivery metric, or FDM).

---

[8] See chapter 3 of our PR13 final determination of Network Rail's outputs and funding for 2014-19.

2.12 To do this, we reviewed Network Rail's proposed CRM-P trajectories, evidence from Arup (as an independent reporter) and consultation responses received from stakeholders. Two operators provided further evidence about the assumptions made about their performance and how this would affect the delays Network Rail might cause to their operations. We reviewed this evidence, agreed with the operators on a number of points and asked Network Rail to amend the CRM-P forecasts to reflect these new assumptions. We have set CP6 baseline trajectories for CRM-P reflecting these amendments (this mostly affects the baseline for one route (London North East & East Midlands (LNE&EM)).
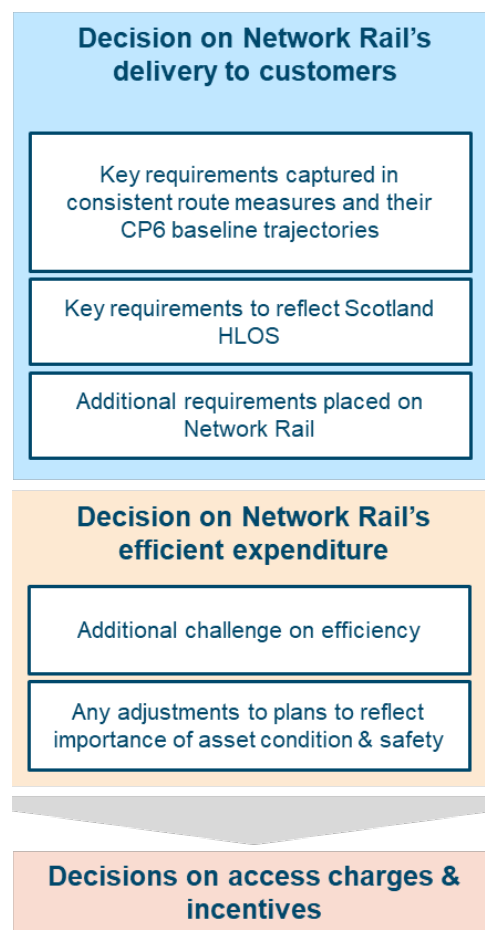
Decision on Network Rail's delivery to customers

Key requirements captured in consistent route measures and their CP6 baseline trajectories

Key requirements to reflect Scotland HLOS

Additional requirements placed on Network Rail

Decision on Network Rail's efficient expenditure

Additional challenge on efficiency

Any adjustments to plans to reflect importance of asset condition & safety

Decisions on access charges & incentives

2.13 We also reviewed Network Rail's proposals for the delivery to freight customers, as measured by FDM, where there was greater agreement with operators about the appropriate trajectory across CP6. This has been translated into a series of route-level CP6 baseline trajectories, as measured by the route-level FDM measure (FDM-R).

2.14 During CP5, Network Rail introduced scorecards to align its priorities with those of its customers and help it incentivise its management to deliver these priorities. These scorecards set out what Network Rail is seeking to deliver for its customers and funders, and how it is performing against this. The scorecards will reflect both CRM-P and FDM-R.

2.15 We will use scorecards in how we regulate Network Rail in CP6, as they can provide useful information about what customers want and what the routes/SO have agreed to deliver. This will allow us to take account of how it is performing against its commitments to customers, as set out in the scorecards. This information complements the other information we receive about Network Rail, including on financial and operational performance and feedback from its stakeholders. We discuss how we will use scorecards to monitor Network Rail over CP6 in chapter 3.

2.16 Reflecting this, we also required routes to seek agreement on key performance targets included in scorecards for PR18. Some operators agreed five-year performance trajectories with their 'lead route' (which represents the route that an operator runs all or most of its services with). Where this is the case, we will place particular emphasis on those measures/relevant trajectories in the way we monitor Network Rail. However, the majority of operators have not agreed measures, albeit there remains an opportunity for them to do so ahead of CP6.

2.17 Scorecards also contain a range of other measures that reflect customer priorities (relating to safety, use of the network and Network Rail's financial performance, for example) that should incentivise Network Rail's delivery to customers.

Our decisions on Network Rail's efficient expenditure

2.18 Broadly, we considered that the proposed expenditure set by each of the routes/SO in their strategic plans was appropriate.

2.19 In our draft determination for England & Wales, we identified a need for more expenditure to improve long-term asset condition. We proposed that around £1bn extra should be spent on this in CP6, to be funded by a number of opportunities for Network Rail to increase its income or reduce its expenditure.

2.20 In response, Network Rail provided us with new evidence that demonstrates that an acceptable level of asset sustainability in England & Wales can be achieved with a smaller increase (of c£500m) in renewals spend (compared with its February 2018 SBP). The company also accepted our proposals that routes should hold a higher proportion of the company's risk funding, and increased the efficiency savings in the plans from £460m to £617m.

2.21 In respect of Scotland, Network Rail has also accepted a number of the challenges we set out in our draft determination, notably by including additional efficiency savings (that now amount to £90m relative to its February 2018 SBP). It has also responded positively to a number of our challenges. For example, it has demonstrated that its approach to allocating central costs across routes in its SBP is reasonable.

2.22 In respect of Great Britain (GB)-wide expenditure, Network Rail accepted that an additional £80m should be spent on safety. It also provided additional information about its proposed spending on research and development (R&D) that has enabled us to accept its proposals that £245m should be allocated to this area, to be funded proportionately from England & Wales and Scotland. This level of spend is subject to new governance arrangements being formalised and agreed with ORR in advance of CP6.

2.23 Our review of Network Rail's costs and income and, in turn, our decisions on Network Rail's efficient expenditure is set out in chapter 7.

Our decisions on Network Rail's access charges and contractual incentives

2.24 A final element of our determination is to set out our decisions on the charges that train operators should pay for using the network and the contractual incentives that should apply to them and Network Rail. These decisions are set out (or referenced) in chapter 9.

Adapting plans and our decisions over CP6

2.25 Network Rail's SBP, its interim response and further information, and our corresponding final determination, have been set in light of the best available information available. However, circumstances will change over the five-year control period.

2.26 PR18 includes a range of ways that support change, ensure it is orderly and/or constrain what and how it takes place. This is intended to enable us to take account of developments, as they arise, in the way we regulate Network Rail while also maintaining route and SO accountability for delivery.

2.27 Changes that may arise over CP6, and as illustrated in Figure 2.3 below, include:

■ **work planned to be delivered by the routes/SO** may be updated and refined. Routes may choose what maintenance and renewals they undertake (and where) as set out in their workbanks, throughout the year. The SO may also refine the timescales for some of its work relating to strategic planning and managing the outputs of the network (e.g. long-term plans, economic analysis for project business cases) to reflect wider developments, including where funder priorities change;

■ **Network Rail's customer scorecards and its annual delivery plans** will, where appropriate, be revised and updated to reflect customers' changing priorities throughout CP6;

■ **route and SO budgets** may change in response to changes in other parts of the network (or in response to developments in the wider industry). If there is a request for the route/SO's budget to be reduced, it will trigger our Managing Change Policy;

■ **changes to the benchmarks that are set out in Schedule 8** of passenger operators' track access contracts. These align with the related routes' CRM-P CP6 baseline trajectories. Although there will likely be recalibrations of Schedule 8 at several points within the control period – for example, due to a franchise remapping of services – we expect the alignment with CRM-P CP6 baseline trajectories to be preserved throughout CP6; and

■ **Network Rail's network licence** may change over CP6, in line with the process set out in the Railways Act 1993. This sets out the process for modifying the licence with Network Rail's consent, requiring a minimum 28 day statutory consultation. There is also an alternative process for us to refer a proposed modification to the Competition & Markets Authority (CMA) for its consideration/decision.

2.28 All of the changes will need to be supported by appropriate stakeholder engagement, to ensure that customers can influence the changing priorities and how any mitigations are managed.

Figure 2.3: Examples of changes over CP6 and how we will reflect them
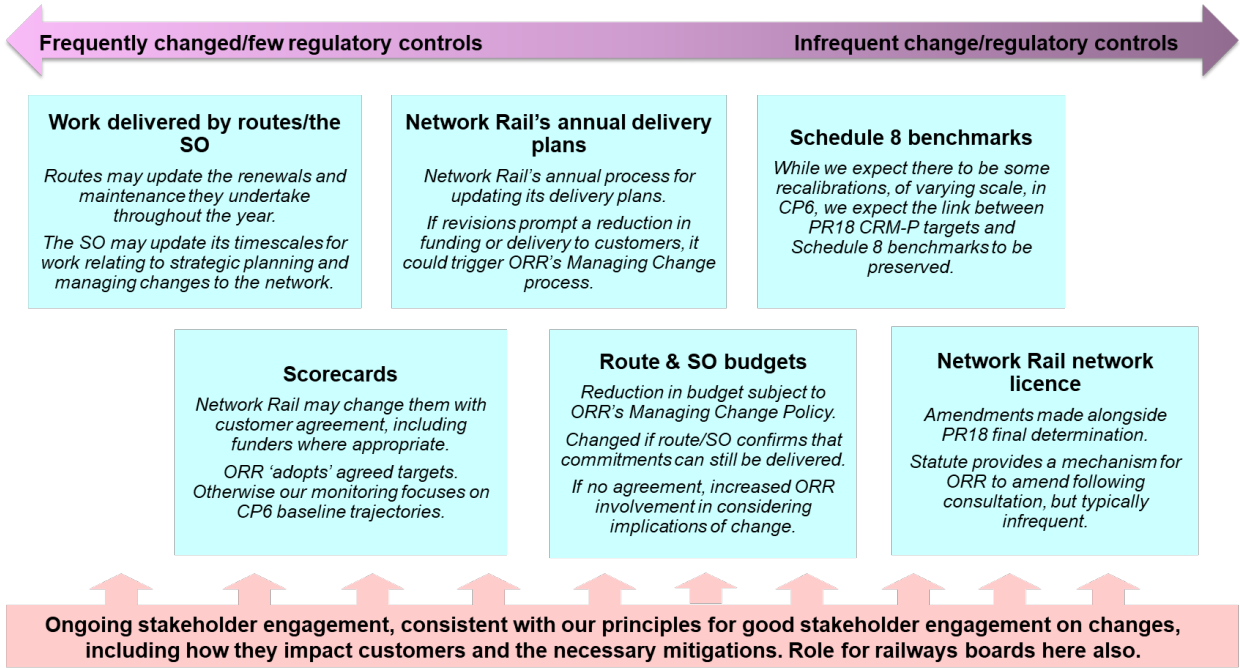
3. Our approach to regulating Network Rail in CP6

Overview

This chapter explains how we will monitor and report on Network Rail's delivery to its customers and other stakeholders, and how we will hold it to account in CP6.

Introduction

3.1 This chapter explains how we will regulate Network Rail's delivery to its customers (principally passenger and freight train operators) and other key stakeholders (notably passenger representatives, funders and local transport decision-makers) in CP6, including by monitoring and reporting and holding it to account. It focuses on the areas set out in Figure 3.1. It should be considered alongside our design framework[9].

3.2 In regulating Network Rail in CP6, we want to support its approach of devolving more responsibilities and decision-making to the routes and the SO, to help ensure Network Rail is more focused on delivering local customers' priorities.

3.3 How we will do this in CP6 reflects the wider changes to Network Rail:

■ **The reclassification of Network Rail as a public sector body** has reduced the likely effectiveness of certain financial incentives on the company, including the imposition of financial penalties. As such, and in addition to using financial incentives and our existing licence enforcement powers, we will make better use of reputational incentives. This has implications for how we monitor and report Network Rail's delivery to

Figure 3.1: Our approach to regulating Network Rail's delivery in CP6

_____
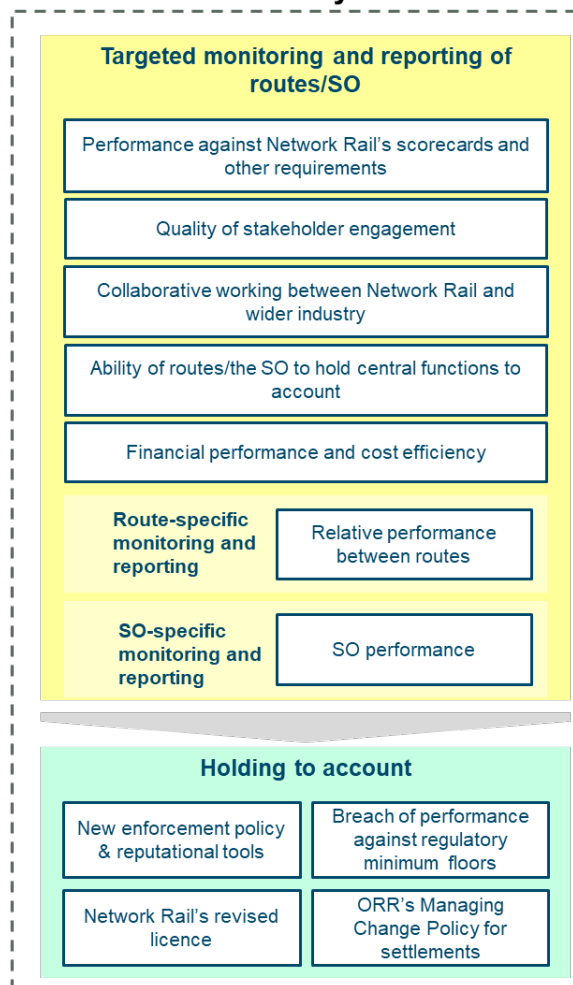
[9] A revised version will be published shortly alongside our consultation on our monitoring and enforcement policy for CP6.

customers and how we hold it to account; and

■ **Network Rail's route devolution** will enable us to monitor Network Rail's delivery to its customers at a route and an SO level, including through the use of the routes'/SO's scorecards. However, reflecting the fact that Network Rail remains a single company with a single network licence, we will continue to monitor what the company as a whole delivers to its customers.

3.4 This chapter discusses, in turn, the two key elements of our approach to regulating Network Rail in CP6:

■ **targeted monitoring and reporting of the routes' and SO's delivery to their customers**; and

■ **holding the routes/SO, and where appropriate Network Rail as a company, to account for their delivery to customers.**

3.5 We have already begun monitoring Network Rail's routes' preparations to deliver efficiently from the start of CP6. We will included key preparedness metrics in our July 2018 Network Rail Monitor, which will be updated in our forthcoming update ahead of 1 April 2019.

Targeted monitoring and reporting of the routes' and the SO's delivery to customers

3.6 Our monitoring and reporting will provide transparency and an independent view of how the routes/SO (and the wider company) are performing. Through it, we will also provide stronger reputational signals by reporting on relative performance and highlighting where there is evidence of out-performance or under-performance.

3.7 In doing this, we will particularly focus on a number of key elements, as described in the diagram on the right. We discuss each of these in turn.
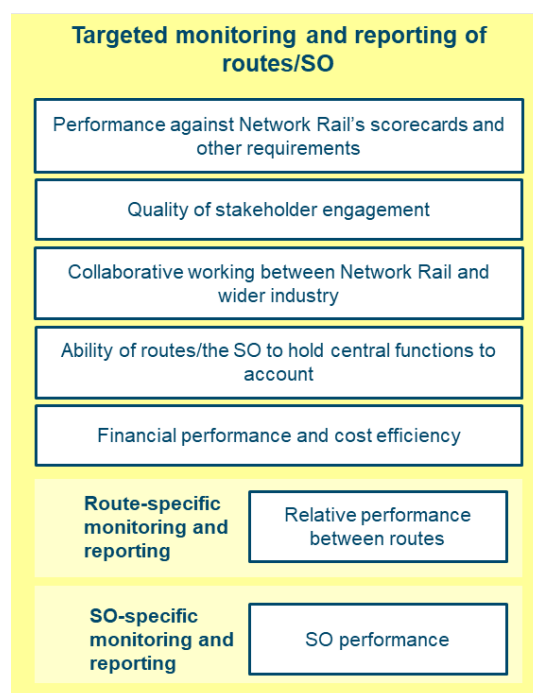
Performance against Network Rail's scorecards and other requirements

3.8 As discussed in chapter 2, the final determination includes a number of key metrics against which we will monitor and report route performance, notably on routes' contribution to passenger and freight

Targeted monitoring and reporting of routes/SO

| Performance against Network Rail's scorecards and other requirements |
| Quality of stakeholder engagement |
| Collaborative working between Network Rail and wider industry |
| Ability of routes/the SO to hold central functions to account |
| Financial performance and cost efficiency |

| **Route-specific monitoring and reporting** | Relative performance between routes |
| **SO-specific monitoring and reporting** | SO performance |

delay and on asset sustainability (as measured by CRM-P, FDM and the composite sustainability index (CSI) respectively).

3.9 Alongside these requirements, Network Rail's scorecards set out what it is seeking to deliver for its customers and funders, and how it is performing against that. Performance against the scorecards heavily influences Network Rail managers' performance-related pay (bonuses).

3.10 The development and use of scorecards has a number of advantages, including that they:

■ encourage the routes/SO to engage with their customers and seek to agree appropriate measures and targets for delivery (rather than having these imposed on the industry by ORR). This should in turn benefit end users of the network by ensuring Network Rail is aligned to what its customers need to run their businesses (and to deliver to their own customers in turn); and

■ provide flexibility to adapt to changing circumstances, recognising that:

– setting fixed regulatory output targets at a periodic review may fail to provide reasonable stretch to management teams across the whole of CP6 (due to changing circumstances and/or out- or under-performance relative to expectations); and

– customers' views on what they want may change over time (including as franchises are renewed and/or there are changes in the freight market). Further detail on changes to the scorecards over CP6 is discussed in Box 3.1.

3.11 Our use of scorecards in how we monitor Network Rail and report on its performance represents a new approach that wraps around Network Rail's processes. In particular, we will make greater use of scorecards in monitoring Network Rail where they:

■ contain a balanced set of measures across Network Rail's activities and reflect the interests of both current and future users;

■ enable route comparison by using a consistent set of measures between routes and over time; and

■ reflect the HLOS requirements where appropriate.

3.12 We discuss the extent to which Network Rail met these requirements in chapter 5.

3.13 Our monitoring and reporting will place particular weight on how the routes/SO performs against any targets that have been agreed with customers. Where there is

clear customer agreement to updated targets, we will place more weight on Network Rail's performance relative to these targets in our monitoring[10], and consequently less weight on the CRM-P and FDM requirements included in the final determination.

Reflecting train performance

3.14 Punctuality and reliability of the network is of critical importance to passengers and freight end users. Devolution and Network Rail's introduction of scorecards enable closer alignment between Network Rail and train operators on what needs to be delivered, to benefit passengers and freight end users. In PR18, we asked Network Rail and train operators to agree stretching yet realistic trajectories in this area (to reflect the England & Wales HLOS). We also asked Network Rail to deliver the performance requirements in the Scottish HLOS.

3.15 With respect to train performance, some operators have reached agreement with routes about how this should be reflected in their CP6 scorecards. Where this is the case, we have reflected this in the route's settlement (described as the operator baseline). As such, we will place particular emphasis on these operator-level measures/relevant trajectories in the way we monitor the routes. However, the majority of operators have not agreed performance trajectories for the CP6 scorecards.

3.16 There remains an opportunity for other routes and operators to agree targets ahead of the start of CP6 and for agreed targets to be reflected in Network Rail's delivery plan[11]. Similarly, the annual review of scorecards enables appropriate annual targets to be set, as shown above.

3.17 More generally, any operator can, as now, contact us regarding any specific concerns. We will consider any such approach in the context of the reasons for the operator and route failing to agree a stretching yet realistic target with Network Rail, and the extent of joint performance planning being undertaken.

3.18 Nevertheless, the process to date highlights that there is considerable scope for improvement with respect to both Network Rail and operator processes and governance around joint planning and agreement of targets.

---

[10] In such circumstances, we would continue to report performance relative to the expectations in our final determination, but these would feature less prominently (reflecting that they have been somewhat superseded by a new statement of what customers want).

[11] Network Rail's business plan will also reflect the baselines that we have set for key consistent route measures – these baselines are set out in chapter 5 of this document.

The role of scorecards in our monitoring and reporting

3.19 Our monitoring approach to scorecards is, in general terms:

■ where a route/the SO out-performs against a customer-agreed target, we would be likely to recognise this in our monitoring and reporting; and

■ where a route/the SO under-performs against a customer-agreed target, we would be likely to consider what plans the customer and the route/SO have in place to address this underperformance, and whether there is a need for additional steps to support improved performance of that route/the SO.

3.20 With respect to Scotland, we will have particular regard to the requirements in the Scottish HLOS, some of which are reflected in the Scotland route, the FNPO and the SO scorecards. In addition, Network Rail has created a Scotland tracker to capture Network Rail's delivery of the HLOS requirements.

3.21 In assessing whether the routes/SO (and Network Rail as a company) are delivering the obligations in the network licence, we will take into account a wider set of evidence, as necessary.

3.22 In addition to scorecards, we will receive other information about Network Rail's performance, including on its financial and operational performance and feedback from its stakeholders. This will include information that is forward-looking and provides an indication of Network Rail's future performance.

Box 3.1: Changes to the scorecards over CP6

Over CP6, we expect Network Rail's scorecards will, where appropriate, be revised and updated to reflect customers' changing priorities – likely as part of Network Rail's annual business planning process during CP6. See Figure 3.2.

The routes/SO should develop and agree scorecards with their passenger and freight train operator customers, including the measures in the scorecard and the appropriate annual targets for delivery. The scorecards also need to be agreed with funders: with DfT in line with the processes set out in its Network Rail Framework Agreement (which sets out how DfT and Network Rail should work together) and with Transport Scotland in the case of the Scottish HLOS requirements[12]. Routes' new railway boards and the SO's Advisory Board (discussed below) should also serve as a key mechanism in this respect.

---

[12] This will cover the requirements of the Scottish HLOS that Network Rail (including the Scotland route, the SO and the FNPO) is accountable for delivering.

Box 3.1: Changes to the scorecards over CP6 (continued)

We have set a CP6 baseline trajectory for certain key measures. We will use this to inform our monitoring and reporting in CP6. Through its business planning process and agreement of annual scorecards, Network Rail's annual targets may vary from this CP6 baseline trajectory, which we will take into account in our monitoring and reporting. Changes to the scorecards will not require formal change control under our Managing Change process. However, a change could occur which is outside of the route/SO's control and which fundamentally undermines the relevance of a CP6 baseline trajectory for a consistent measure. We would consider requests for us to take into account the impact of the change by revising the baseline that we use for our monitoring and reporting.

However, we would expect Network Rail to follow the Managing Change process should a route or the SO propose to cease to include/report against any of the Network Rail or ORR consistent route measures on its scorecards. Were this to arise, we would consider:

■   the impact that this would have on our three tests for incorporating scorecards in our regulation of Network Rail (balance, ability to compare routes and reflecting the HLOS, as set out above);

■   whether the change undermines our ability to make effective comparisons across routes; and

■   whether a suitable alternative measure is being proposed instead.

Figure 3.2: Process for changes to Network Rail's scorecards – example using passenger performance
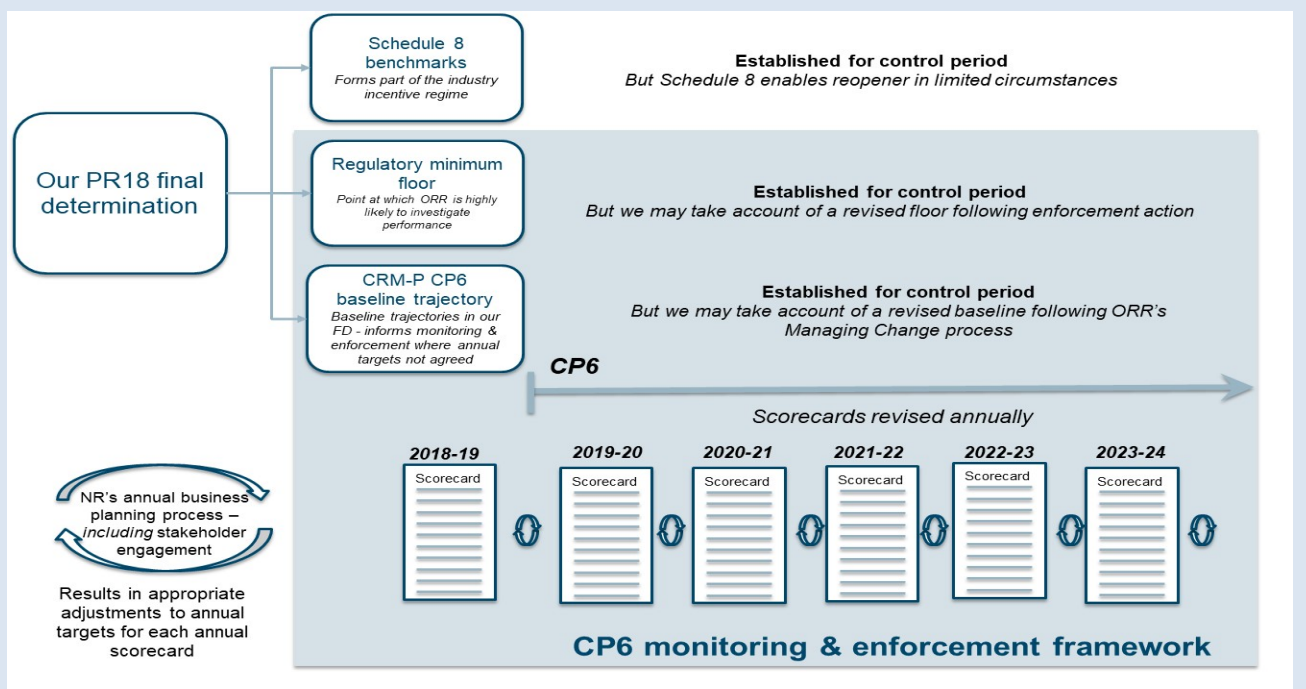
Quality of the routes'/SO's stakeholder engagement

3.23 It is important that Network Rail's customers and other stakeholders are able to engage with the routes/SO to influence what they deliver and how they deliver it.

3.24 We are proposing new obligations in Network Rail's network licence with respect to its stakeholder engagement. In line with those obligations, we set out below some more detailed expectations for how Network Rail should act to achieve the full benefits of good stakeholder engagement for the railway.

What Network Rail should engage on

3.25 Network Rail should treat its stakeholders in a way appropriate to their reasonable requirements. Without prejudice to this, we expect the routes/SO to, as a minimum:

- **engage with stakeholders in the annual business planning process**, providing them with an opportunity to influence the annual delivery plans as they are being developed, including by providing stakeholders with detail about what they are seeking to achieve and what they will deliver for them;

- **develop and agree any scorecards with their passenger and freight train operator customers and funders** as part of the annual business planning process over CP6. We discuss how the routes/SO should engage with customers in agreeing scorecards (including in how the scorecards develop over CP6) in chapter 5; and

- **ensure there is scope for bilateral and multilateral engagement**, building on existing relationships, groups (e.g. the National Task Force (NTF[13])) and joint strategies (e.g. joint performance improvement plans (JPIPs) and performance strategies that provide a means for Network Rail and an operator to agree bilateral performance plans and targets).

How Network Rail should engage

3.26 In general, we will not be prescriptive about how Network Rail engages with its stakeholders. Rather, we will expect it to follow our broad principles of good stakeholder engagement:

- **effective**, in that it supports delivery of a safer, more efficient and better used rail network (in terms of performance and capacity), including by ensuring that stakeholders' views are duly taken into account. For example, when engaging on strategic matters (such as annual business planning) Network Rail should

---

[13] The NTF is the body through which the industry cooperates to improve performance.

ensure that its engagement allows its stakeholders to influence its priorities. Network Rail should also engage with stakeholders in a way that enables them to challenge its performance (where necessary);

■ **inclusive**, in that the engagement seeks to involve all relevant stakeholders in a fair and proportionate manner and adopts different approaches to reflect stakeholders' differing capacities and interests;

■ **well-governed**, in that it is underpinned by effective processes and governance arrangements that encourage meaningful engagement and accountability, as well as providing mechanisms for challenge and escalation; and

■ **transparent**, in that Network Rail (i) provides sufficient information to its stakeholders to enable them to engage properly with it; and (ii) is able to demonstrate how it has engaged with its stakeholders and how this has influenced its actions and delivery. Further:

– in their engagement on performance, the routes/SO should provide accurate and appropriate information and data to enable stakeholders to understand, influence and challenge its performance in an effective and timely way; and

– in their engagement on annual business planning and other strategic matters, the routes/SO should keep a record of key points made by different stakeholders and explain how it has acted on these (or, if not, why not).

3.27 Engagement should be proportionate to what it is seeking to achieve, so that money on engagement is well spent.

3.28 We will take account of the quality of the routes'/SO's stakeholder engagement in how we monitor their overall performance; for example, we are likely to focus more on the performance of the routes/SO that are engaging less effectively with their stakeholders compared with those that are engaging well. We will also take account of the quality of the routes'/SO's engagement in determining whether and how we take action against Network Rail in the event that we have concerns about its performance.

Route supervisory boards (now railway boards) and the SO Advisory Board

3.29 As part of its transformation plan, Network Rail has been establishing new, more formal and senior-level forums that bring together the routes/SO and their customers to help them work together.

3.30 We welcome this development, and see value in ways that encourage discussion and closer working between the routes/SO and their customers, as well as providing a

means to challenge and escalate concerns about Network Rail's (or its customers') performance in a timely and constructive way, where necessary.

3.31 For ORR, these provide an additional means of monitoring how well the routes/SO are working with their customers. And where concerns about a route/SO's performance arise, the existence of such a forum provides an opportunity for remedial action to be discussed and agreed. This means that formal intervention by ORR can come later in the process, once routes, the SO and/or their customers have attempted to address the problem (including by identifying the appropriate solutions). This has the benefit of keeping the focus on customer-route/SO engagement, and reducing the risk that the process becomes unduly focused on ORR's view of customers' requirements.

3.32 Box 3.2 sets out our expectations for the purpose and scope of senior-level forums that would need to be met in order for us to take account of them in the way we monitor and hold Network Rail to account.

Box 3.2: Our expectations for senior-level route / customer forums we can rely on in monitoring and holding to account

To enable us to rely on a forum in which a route/the SO engages with its stakeholders, it would need to provide, as a minimum, a means to:

■ discuss performance and, where necessary, challenge it (relative to scorecards and the requirements set out in the final determination);

■ identify causes of any under-performance relative to targets and recognition of factors supporting out-performance;

■ agree practical action plans to remedy issues, which could include actions on both the route/SO and customers. Delivery against these actions could in turn be monitored and reported on;

■ provide an appropriate level of information in the public domain (e.g. publishing notes and minutes of the meetings) to enable stakeholders who are not members of the relevant group to decide if/when they need to engage with the routes/SO and/or the forum. Any public reporting would need to be subject to usual commercial and confidentiality interests; and

■ hold the route(s)/SO to account in an effective manner (e.g. by way of escalating concerns within Network Rail and/or to ORR – this may require the forum to have a direct relationship with ORR).

3.33 From late 2017, Network Rail created new route supervisory boards. These brought together the routes and their customers to help them work together more effectively.

While we welcomed this development, we expressed concern in our draft determination that the purpose and scope of route supervisory boards would make it difficult for us to take account of them in the way we monitored the routes' performance. This reflected our concerns (considered against our expectations for such groups, as discussed in Box 3.2) that there was: no mechanism for supervisory boards to hold the routes to account; insufficient emphasis on providing challenge of routes' performance; and inadequate public reporting.

3.34 Respondents to our draft determination agreed. DfT said the route supervisory boards were not yet operating in a satisfactory manner, while Midlands Connect queried how effective and transparent they were. Arriva raised concerns regarding the difficulty of the FNPO's Route Supervisory Board in securing the needs of its operators who run services across the network.

3.35 In response to these challenges (and in light of a wider review of the effectiveness of the route supervisory boards), Network Rail has revised its proposals, including by renaming the groups as railway boards. The main features of the railway boards are that:

- they will be chaired by an independent member and be made-up of senior representatives from the route, the relevant operators, the SO, the FNPO, Transport Focus and, where appropriate, local or national funders. Some railway boards will cover more than one route (e.g. East Coast Main Line Railway Board, Northern Railway Board, Chiltern Railway Board);

- they should hold the routes to account by way of escalating concerns within Network Rail, owning groups and/or to ORR. The chair, through the scorecard and relative to the expectations set out in the final determination, should discuss performance and, where necessary, challenge it;

- they should identify causes of under-performance and agree practical action plans to remedy issues;

- they should be used to involve stakeholders in the annual business planning process and be a mechanism to develop and agree route scorecards;

- they should provide an appropriate level of information in the public domain through a key messages report with actions following each meeting and publish an annual plan for passengers explaining what they can expect from Network Rail; and

- the railway board chairs should report on the progress of its relevant railway board to the chair of Network Rail.

3.36 In addition, we have agreed with Network Rail that:

■ all members of a railway board should provide their formal opinion about the route's performance in the railway board's annual report to ensure each member's interests and concerns are fairly represented; and

■ the chair of a railway board should engage regularly with ORR (e.g. quarterly) so that we can take account of the boards in the way we monitor the route's performance.

3.37 Considered against our expectations for such groups (as set out in Box 3.2), we are supportive of the changes that have been made and consider that the new railway boards should enable us to take account of them in monitoring Network Rail. However, they are at an early stage of development and there are risks in ensuring they can both effectively hold the route to account while providing a mechanism for joint working. As such, we will consider how well they are working over CP6, including by taking account of Network Rail's independent review (that it intends to undertake in 2019), as well as any further evidence on their effectiveness.

3.38 Separately from the routes, the SO has also developed new external governance arrangements that include the establishment of an SO Advisory Board (which is similar in function to the routes' railway boards). This is independently chaired and made-up of experts from the passenger, freight and system operation community, as well as a representative of the national funders and the operators. The SO Advisory Board has a formal role in approving the SO's annual business plan and annual narrative report. The SO will publish the papers and minutes of the meetings[14]. This approach should enable us to draw on the role of the SO Advisory Board in the way we monitor the SO's performance.

ORR's regular assessment of the routes'/SO's stakeholder engagement

3.39 To incentivise the routes/SO to improve the way they engage with stakeholders over CP6, we will undertake an annual assessment of the quality of the routes'/SO's engagement on a regular basis over CP6. We will consult on our proposed approach shortly, which will be available here.

Collaborative working between Network Rail and wider industry

3.40 It is important that the routes/SO (as well as Network Rail more widely) work with the rest of the rail industry to drive improvements in performance and efficiency on the railway. There is no simple prescription for achieving this: it will require flexibility and commitment from industry participants and, where appropriate, targeted support from ORR.

---

[14] To date, the SO Advisory Board has met twice: information on these meetings is available here.

3.41 Route devolution within Network Rail means the routes/SO now have more power to decide how to run their businesses. In addition, the routes/SO will have their own budgets (subject to oversight and appropriate change control mechanisms), allowing them to retain the benefits of efficient spending for use within the route. This should allow the routes/SO to identify ways they can spend their budgets more efficiently, including by working more closely with their stakeholders.

3.42 There is also scope for more formal forms of collaboration. For example, alliance agreements – whereby Network Rail and operators agree to adopt joint working practices in certain areas, and which are usually implemented through the re-franchising process – could be deployed to encourage performance and efficiency improvements. There is also a requirement for Network Rail and operators to create joint plans to improve train performance in the network code. The emphasis placed on agreement between operators and routes is consistent with the principles underlying these forms of collaboration.

3.43 Table 3.1 sets out several specific areas in which we expect Network Rail and operators to work together to achieve gains in performance and efficiency, and where we will provide support as appropriate. We will consider how well Network Rail is working collaboratively with the wider industry over CP6, including through take-up of these opportunities.

3.44 In addition, we will remain open to considering representations from industry on cases where aspects of the regulatory regime could be seen to act as barriers to improvements in performance and efficiency; see Box 3.3 for more detail on this.

Table 3.1: Opportunities for Network Rail and operators to work together to drive improvements in performance and efficiency, and actions ORR will take

	Opportunity for industry	**ORR enablers**
Stakeholder engagement	Good engagement by the routes/SO with their stakeholders will help them to build an understanding of their stakeholders' priorities and how best to deliver them. This will allow the routes/SO to make better decisions regarding their activities, which in turn should promote better performance and efficiency. Good stakeholder engagement is also an important enabler for innovative commercial arrangements between Network Rail and operators (see below).	As discussed above, we expect the routes/SO to engage with stakeholders in line with our principles for good stakeholder engagement. To support this, we will monitor and assess the quality of stakeholder engagement by the routes/SO throughout CP6.

	Opportunity for industry	ORR enablers
Innovative commercial arrangements between Network Rail and operators	Some opportunities to improve performance and efficiency on the railway could be unlocked by Network Rail entering into innovative commercial arrangements with one or more operators (that is, arrangements going beyond those governed by track access contracts etc.). As noted above, good stakeholder engagement is a precondition for this, as is a flexible and entrepreneurial approach from all parties. We expect Network Rail and operators to be open to maintaining and building on such arrangements over CP6.	There are some perceived barriers to industry entering into innovative commercial arrangements, particularly with regard to arrangements aimed at reducing Network Rail's costs. To help facilitate more innovative commercial arrangements between Network Rail and operators, we will publish guidance that sets out our views on what commercial arrangements are likely to be permitted, focusing on the perceived barriers. This is discussed in more detail below.
Performance Innovation Fund (PIF)	Certain projects that could improve performance may not proceed because of factors related to the structure of the market (e.g. possible coordination/free-rider problems, or misaligned risk appetites and time horizons). Where Network Rail or operators identify such opportunities and are otherwise unable to take them forward, there may be scope to access funding through the PIF.	To enable investment in innovative projects that have a real prospect of driving performance improvements, we have established a Performance Innovation Fund worth £40m over CP6. This will be open to bids from across the industry (including Network Rail and passenger and freight operators). We will work with industry to develop governance arrangements that promote prudent use of the fund without being unduly onerous for applicants.

> **Box 3.3: The regulatory regime as a potential barrier to performance improvements**
>
> Some existing regulatory rules governing the rail industry could be seen as a barrier to industry pursuing projects or ways of working that could improve performance or efficiency. It is also conceivable that aspects of the regulatory regime could have unintended consequences that prevent performance improvements.
>
> Where stakeholders approach us with proposed changes to the regulatory regime that offer a realistic prospect of leading to improvements in performance, we will be open to engaging with them on this, potentially with a view to 'relaxing' certain rules (albeit on a carefully managed trial basis).
>
> We would be likely to require that trials are structured in such a way that they provide robust evidence to inform our future decisions on the regulatory regime.

ORR guidance on innovative commercial arrangements between Network Rail and operators

3.45 In our November 2017 working paper on collaborative working[15], we looked at what could be done to promote collaborative working to improve Network Rail's efficiency. We also interviewed a number of operators on these issues.

3.46 We were given many examples of ways in which Network Rail and operators already work together to help Network Rail to deliver efficiently. However, it is clear that there is scope to do more. We have identified the following barriers to more effective collaboration on the rail network:

- variations in the willingness of Network Rail staff to collaborate, and more generally the willingness of Network Rail to be flexible and to empower its staff to work creatively with operators;

- lack of clarity and consistency of understanding on what Network Rail is permitted to do to share the benefits of collaboration with operators;

- failure of Network Rail to share sufficient information with operators;

- lack of resource within operators; and

- a perception that collaboration is harder to achieve on multi-operator routes.

3.47 Several stakeholders expressed concern that there was a risk that collaboration between Network Rail and one operator could lead to other operators being treated unfairly (although we were not shown examples of this happening in practice).

3.48 Stakeholders expressed some optimism that route supervisory boards (now railway boards, discussed above) might play a role in collaborative working. They also suggested several things ORR could do to promote collaboration and to mitigate the risks collaborative working could give rise to, including to:

- ensure there are appropriate governance arrangements in place over collaborative working, particularly with ensuring all operators on multi-operator routes are treated fairly;

- establish clarity on what Network Rail, given its status as an arm's length public sector body, is permitted to do to share the benefits of collaboration with operators;

---

[15] Working Paper 7: Collaborative working on the rail network. This may be accessed here.

- monitor the nature and scale of collaboration. This could include recognising and promoting the spread of best practice and/or giving a view on whether Network Rail is doing enough to collaborate with its customers; and

- issue guidance on how the routes/SO and other business units and operators should collaborate. This could include principles parties should follow when collaborating, and could also cover matters such as governance arrangements, particularly with regard to benefit sharing and fair treatment of all operators, as well as other matters such as the information Network Rail should share with operators to facilitate collaboration.

3.49 Reflecting this feedback, we will publish guidance that sets out our views on what commercial arrangements are likely to be permitted, focusing on the perceived barriers. We aim to publish this guidance by 31 March 2019.

Performance Innovation Fund (PIF)

3.50 We have established a PIF worth £40m over CP6[16]. The purpose of the fund will be to support innovative projects aimed at driving improvements in performance that would otherwise fail to obtain funding due to coordination/free-rider problems, or because the benefits are uncertain or distant (Box 3.4 discusses in more detail ways in which such problems may prevent innovative projects being pursued). The fund is not intended as a substitute for Network Rail's core operations, maintenance and renewals expenditure, nor should it be a substitute for spend by franchised passenger operators to meet their contractual commitments.

3.51 The PIF is different from the ring-fenced funds provided in previous control periods. We want the fund to provide an incentive for the industry to think creatively about ways to improve performance on the railway, and to provide information about what does and does not work, so that this knowledge can be shared across the industry. It will be open to bids from across the industry (including Network Rail and passenger and freight operators). The PIF will increase the focus on removing obstacles in current working practices that prevent a more effective focus on performance improvement.

3.52 We will work with Network Rail and wider industry over the coming months to develop the design of the PIF. This will cover:

- more detailed criteria for the types of project that can be funded from the PIF;

---

[16] This reflects feedback to our proposal for the PIF set out in the draft determination. In particular, and reflecting the fact that stakeholders were supportive, we intend to take forward this mechanism and to allocate a further £30m of funding to it (we had suggested in our draft determination that the PIF would be worth £10m). Respondents' views on the PIF are set out in full in chapter 4 of our document summarising responses to the draft determination.

- governance of the fund: we expect that the fund will be largely governed by the industry, to the extent that is appropriate (which will depend, for example, on the types of project the fund can be used for); and

- expectations for how knowledge gained through projects funded in this way should be captured and disseminated across the industry.

Box 3.4: Factors that may inhibit innovative projects to improve performance / efficiency

- Coordination and free-rider problems: A coordination problem occurs where a group of firms or individuals are unable to coordinate their activity to achieve the jointly optimal outcome. A free-rider problem occurs where a firm or individual can benefit from a good or service without paying for it, resulting in the good or service either not being provided at all or being provided at less than the optimal level. On the railway, poor coordination could occur where an intervention would prove beneficial to several operators, but it proves impossible for them to agree on how to fund it.

- Uncertain benefits: There may be uncertainty as to whether an innovative project will deliver an improvement in performance and how big this improvement will be. While taking such risks may be appropriate at the industry level, particularly where a trial could yield information that can be applied more widely, individual industry participants may choose not to take the risk themselves.

- Distant benefits: Some innovative projects may not provide a payoff in terms of improved performance until some time in the future. The incentives on operators to invest in such projects might be weakened where benefits may not be realised until after their franchise has ended, for example.

Ability of the routes/SO to hold central functions to account

3.53 We have set out our proposals to focus much of our monitoring and reporting of Network Rail's performance on the routes and the SO. However, a significant proportion of Network Rail's activity is undertaken by its central functions. These central functions are its business units outside of the routes and the SO, such as the Infrastructure Projects directorate (responsible for delivering enhancements and major renewals for the routes) and the Safety, Technical and Engineering directorate[17] (STE, which, among others things, sets technical policies and standards for the routes, the SO and the wider rail industry).

3.54 Importantly, the central functions' primary customers are the routes and the SO. This means that there is significant potential for the routes and the SO to exert pressure on these functions in ways that provide appropriate incentives on the central

---

[17] This is also known as the 'Technical Authority'.

functions to deliver effectively. There are also some instances where central functions' performance impacts operators directly (e.g. through STE's development of industry standards).

3.55 While our focus will be on the routes/SO, Network Rail remains a single company and its activities are subject to our regulation. As they are part of Network Rail, central functions will need to deliver in accordance with Network Rail's network licence.

3.56 However, the precise way in which we will regulate central functions will depend on the extent to which the routes/SO can exert commercial discipline on them. Where Network Rail allows the routes/SO to act as informed customers, we will reflect this in the way we regulate the central functions by, for example, giving space to the routes/SO to scrutinise the central function's performance and to challenge them, where necessary.

3.57 Where we have concerns about a central function's activities – and/or we are not confident that the governance arrangements provide sufficient assurances that the routes/SO can influence and exert pressure on the central functions – we will adapt our approach accordingly. This could involve focusing our monitoring and reporting activity on a central function's performance, and considering its performance against its scorecard and whether there is evidence to justify enforcement activity.

3.58 As part of its transformation plan, Network Rail has implemented some changes to its internal governance arrangements that determine how the routes, the SO and central functions work together. It is also considering how it undertakes enhancements and related capital work, including the role of the routes, the SO and Infrastructure Projects in delivering this.

3.59 For CP6, we would expect Network Rail's internal governance arrangements to meet the following principles:

■ the routes/SO have the necessary information to understand the central functions' performance, including through central functions' scorecards;

■ the routes/SO have a choice over their own procurement decisions (e.g. whether they wish to undertake the service themselves, procure it from a central function or procure it from outside of Network Rail), unless there is evidence this is inconsistent with Network Rail's other obligations in the network licence; and

■ where the routes/SO are not free to choose how they are supplied, they are able to hold central functions to account by having the necessary processes, relationships and groups through which to discuss, influence and challenge performance in line with what would be expected to happen under competitive market conditions.

3.60 Reflecting the fact that Network Rail is in the process of implementing new internal governance and reporting of central functions, we expect to pay attention to the routes'/SO's relationship with central functions in the way we monitor Network Rail over CP6, particularly with respect to the extent to which its internal governance and reporting satisfies our principles. To support this, we will review the extent to which the governance arrangements are meeting our principles for effective internal governance over CP6.

3.61 In addition, we have proposed a new obligation on Network Rail, through its network licence, to:

■ enable the routes/SO to choose how to procure the goods and services they need (including those provided by central functions); unless

■ it demonstrates this would be inconsistent with its licence (including the requirement of the Network Management Duty to act in an efficient and economical manner) or with another area of law.

3.62 In practice, we would not expect Network Rail to demonstrate such an inconsistency for existing commitments made by central functions. However, when Network Rail (including a route or SO) wishes to exercise discretion to renew/extend an existing arrangement and/or change or make new arrangements, Network Rail would need to demonstrate that future goods and services are provided in line with the above requirement of the licence.

3.63 This is intended to increase the transparency and accountability of the routes/SO, while also providing a mechanism for Network Rail to make decisions about goods and services centrally where, for example, scale economies mean that this is needed for the efficient operation of the network.

Financial performance and cost efficiency

3.64 We will monitor and report on each of the routes'/SO's financial performance and cost efficiency. This will provide further incentives to the routes/SO to improve their financial performance.

3.65 To do this, each of the route and SO settlements sets out the funding they will receive (the revenue requirement) to enable them to deliver their commitments to their customers. It also includes provision of funds to manage risk, both within the route/SO and across Network Rail.

3.66 The company will account for income and expenditure in ways that maintain a clear picture of each route's/SO's performance[18]. In particular, this means that:

■ charges income and funding from governments will be recognised at the route level;

■ expenditure will be recorded at route and SO level, including expenditure by the routes and SO on services procured from other parts of Network Rail (including from central functions); and

■ the FNPO will have a particular role to provide funding to geographic routes so that they receive equivalent income from both passenger and freight operators (noting that a number of major freight market segments do not face charges to recover fixed costs).

3.67 Building on this approach, we will continue to measure Network Rail's efficiency and wider financial performance in CP6, and will make a number of incremental changes to our current approach (including putting more focus than previously on the SO's financial performance)[19].

3.68 Different measures can be used to report on a company's financial performance and there is no single right or wrong measure. Our assessments of financial performance and cost efficiency in CP6 will look across a range of different, complementary measures (that are both quantitative and qualitative) to come to a fuller view of Network Rail's performance in this area. However, we are likely to consider two measures in particular:

■ **efficiency**: this compares expenditure on core business activities (operations, maintenance, renewals and supporting central functions) on a like-for-like basis over time; and

■ **the financial performance measure (FPM)**: this compares income and expenditure to the financial assumptions underpinning routes'/SO's CP6 funding. This will be the main measure for comparing routes'/SO's financial performance in CP6[20]. The baseline financial assumptions underpinning FPM include efficiency improvements that the routes/SO are expected to achieve in CP6. If a route/the SO has spent less and/or received more income than the

---

[18] These money flows are explained further in chapter 2 of our 'Second consultation on the PR18 financial framework'. See here.

[19] This is discussed in our June 2018 document 'Our approach to assessing Network Rail's efficiency and wider financial performance in CP6 – conclusions', available here.

[20] Providing that Network Rail can provide a clear reconciliation between routes' internal budgets and our PR18 financial assumptions, the company's internal budget should form the baseline for calculating and reporting financial performance and this will be shown on the route and SO scorecards. This should help to reduce some of the complexity of the CP5 measure but still allow reporting against the PR18 determination.

baseline (for what it has delivered), it will report financial outperformance, and vice versa.

3.69 Our approach for assessing the routes'/SO's efficiency and financial performance in CP6 will:

■ achieve a better understanding of the efficiency by putting greater emphasis on reviewing and reporting on how they have delivered efficiency improvements;

■ include an assessment of cost drivers, unit costs and productivity measures over time and across routes;

■ make greater use of information from our safety role, for example, drawing on insights from safety reports where relevant; and

■ provide a forward-looking view of the efficiencies that Network Rail is likely to achieve across CP6 as part of our annual reporting. This will include assessing the quality and progress of routes' efficiency plans and monitoring the leading indicators of delivery.

3.70 We will work with Network Rail and other stakeholders over the next few months to agree what specific information we should use to inform aspects of our assessments, in particular for cost drivers, unit costs, productivity measures and leading indicators of performance.

Relative performance between routes

3.71 We will monitor and report publicly on how well each route is performing against the targets it sets itself. We will use Network Rail's scorecards (including its route comparison scorecard; see Figure 3.3) and other management information. In doing this, we will make greater use of comparison between routes, in a way that is meaningful and fair. This will sharpen the incentives on each route to perform and will provide a stimulus to sharing of best practice across Network Rail.

3.72 To support comparison between routes, we are requiring Network Rail to report on certain consistent route measures in CP6:

■ for all the geographic route scorecards, the consistent route measures relate to the route's contribution to train performance for passenger (CRM-P) and freight (FDM) services and to network sustainability (CSI); and

■ for the route comparison scorecard, Network Rail has agreed to include a set of additional end-user focused measures (e.g. passenger satisfaction for the route).

3.73 We will also compare Network Rail's performance at route level against our expectations included in the final determination (and as set out in the delivery plan), and also against how well other routes have performed against these expectations.

Figure 3.3: Network Rail's route comparison scorecard – an illustrative, draft example
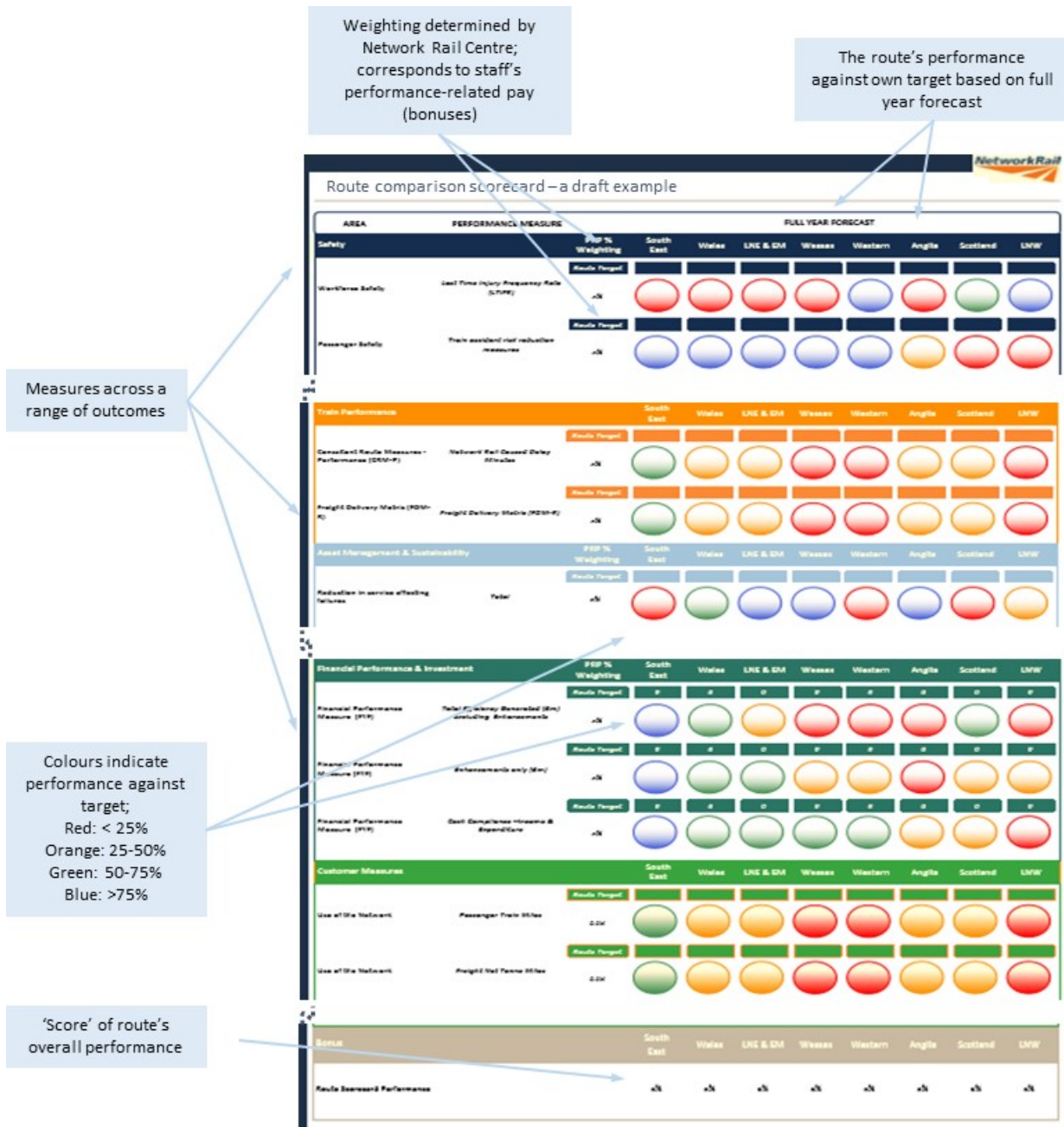
The SO's performance

3.74 The SO's responsibilities include leading strategic planning, managing changes to what the network delivers and producing the timetable. As discussed above, the SO will have its own settlement in CP6 that will provide it with its own budget to fund its delivery to customers (namely, operators, Network Rail routes, other infrastructure managers, and national and local funders).
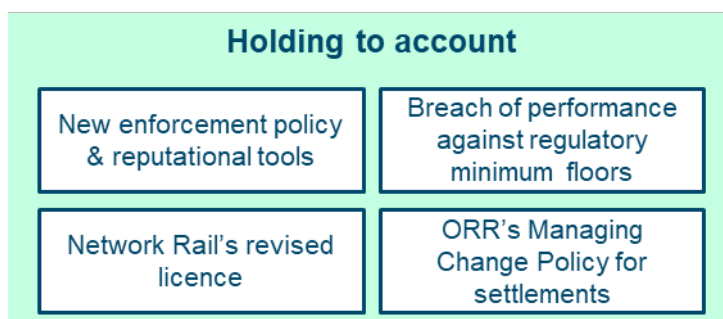
3.75 In line with the routes, the SO will have its own set of scorecards (including a national tier 1 scorecard, as well as functionally disaggregated (tier 2) and geographically disaggregated (tier 3) scorecards) that it will use to agree priorities with its customers and to report on its performance. We will monitor and report on the SO's performance using these scorecards.

3.76 However, for many of the SO's activities it is not possible or appropriate to capture the quality of the SO's performance using quantitative metrics, as is required to be included on a scorecard. For example, it would be difficult to capture the quality of the SO's advice to funders, franchising authorities and operators about how the network should be used in a single scorecard metric.

3.77 As such, and reflecting the commitments made in the SO's strategic plan, we will require the SO to produce and publish an annual narrative report. This should explain those elements of its performance that do not lend themselves to scorecard reporting, and reflect on the quality of its service and areas for improvement. To ensure the report is sufficiently comprehensive, we are also requiring that the SO formally agrees the content of its annual report through the SO Advisory Board.

Holding Network Rail, the routes and SO to account for delivery to customers

3.78 Our determination sets expectations for Network Rail. How well it delivers these is ultimately determined by the decisions and actions of all those working at Network Rail.

Holding to account

| New enforcement policy & reputational tools | Breach of performance against regulatory minimum floors |
| Network Rail's revised licence | ORR's Managing Change Policy for settlements |

3.79 Network Rail's reclassification as a public sector body has affected how we hold it to account, in particular by increasing the relative importance of reputational incentives.

3.80 As regulator, we set the regulatory framework, licence conditions and monitoring and enforcement policies that can create or reinforce many of these incentives. This is supported by our proposals on how change should be managed throughout CP6.

Enforcement policy and reputational tools

3.81 In the absence of private capital and incentives to maximise profits, it is important to understand what motivates Network Rail to deliver. One of the strongest incentives – corporately and individually – is to maximise reputation.

3.82 Reputation, in the widest sense, encompasses professional pride, individual recognition and belief in what an organisation is trying to achieve. Procedural

incentives, whereby the level of scrutiny or process applied to an organisation or business unit is linked to performance – so that good performance is rewarded with greater freedom – can also be effective motivators. Such approaches can be effective in industries where there is a strong sense of affiliation and loyalty combined with a desire for operational freedom and earned autonomy. In rail, there is a particularly strong sense of pride exhibited by those working in the industry.

3.83 Reflecting this, we will be updating our monitoring and enforcement policies for CP6 to take account of this shift towards reputational incentives and also the increased focus on monitoring and reporting on the performance of routes and the SO. We will consult on these tools shortly, as part of updating our monitoring and enforcement policies for CP6.

3.84 We will continue our current approach in terms of acting in a way that is:

- **risk-based**: where there is reliable evidence that a route or the SO is lagging (including when compared with other routes/the SO), we would place more scrutiny on them; and

- **proportionate** to the scale of the issue: we will continue to use a range of tools when intervening, some of which will involve relatively moderate steps (e.g. additional reporting requirements), while others will carry more significant consequences (e.g. enforcement action targeting sanctions on the relevant parts of the business).

3.85 However, we have also identified a number of improvements to the ways in which we can hold the company to account, including:

- increasingly **focusing our engagement with the route and SO** management teams, where the issues being investigated relate to the routes/SO;

- **ORR hearings between the route/SO** and affected parties, in order to reinforce accountability at this level of management and provide an opportunity to better understand both parties' perspectives; and

- using **regulatory sanctions at the route- and SO-level**, which would have the effect of reducing the profit recorded in the relevant business unit (while not reducing the financial resources available to the route/SO). Where Network Rail reflected these sanctions in its management incentives schemes, this would provide a sharper incentive on the relevant management teams, and reduce the need to resort to financial penalties (which have the disadvantage of reducing the resources available to the company).

Breach of performance against regulatory minimum floors

3.86 A regulatory minimum floor signals the point below which we will be highly likely to consider a formal investigation into whether or not Network Rail has breached its network licence (i.e. issuing a 'case to answer' letter challenging whether Network Rail is doing everything reasonably practicable to deliver the reasonable requirements of its customers and funders). The floor is set at a level at which we consider performance to be unacceptable.

3.87 We have set a regulatory minimum floor for three of the consistent route measures that we are requiring the geographic routes to include in their scorecards. We are also setting a floor for national freight performance.

3.88 We may choose to take formal regulatory action before performance falls below a minimum floor, depending on the available evidence, including whether routes, the SO and customers are taking effective, agreed actions to remedy any under-performance.

The role of the revised Network Rail licence

3.89 Network Rail operates under its network licence, which requires it to comply with the licence conditions that we set in the public interest. These licence conditions underpin our approach to holding Network Rail to account and in monitoring compliance. We have statutory powers to take enforcement action where Network Rail breaches its licence conditions.

3.90 Network Rail's core obligations within the licence relate to securing the operation, maintenance, renewal and enhancement of the network in order to satisfy the reasonable requirements of its customers and funders. This will not change.

3.91 However, we are making a number of changes to improve the effectiveness of the licence. First, we will strengthen the core obligations around stakeholder engagement and passenger information. Second, we will restructure the existing obligations within the network licence and introduce a number of new obligations for the start of CP6. The reasons for these changes are to: support the devolution to routes and SO businesses within Network Rail; reflect what the routes/SO are required to deliver for their customers and what they are funded for (route/SO settlements); and reflect other changes in circumstances since CP5.

3.92 The changes that we expect to make will mean that:

■ the licence will clearly identify those obligations which apply to the routes and the SO. This will signal who is accountable and, in future, help us to more clearly hold them to account when there is a breach;

- the company will be required to maintain the structure of its business and its governance arrangements in a manner which supports devolution, including where there are changes to the business (discussed as part of ORR's Managing Change Policy within CP6, below);

- the licence is aligned with our overall framework for PR18 in how we will regulate Network Rail (such as governance requirements); and

- the licence reflects reclassification of Network Rail as a central government body, the change in funding arrangements and the roles of DfT and Transport Scotland.

3.93 This is discussed further in our supplementary document on the review of the Network Rail network licence, available [here](#).

Managing changes relevant to the routes' and the SO's settlement within CP6

3.94 The CP6 settlements set out the funding that each of the routes and the SO will receive to enable them to deliver their commitments to their customers. These settlements are based on the route and SO accountabilities set out in their plans. However, there will be changes during the control period that may impact the routes'/SO's funding and/or what they need to deliver relative to those settlements. It is important that Network Rail, the routes and the SO are able to respond to changing circumstances and adapt their plans so that they still deliver for customers and stakeholders. Changes must be made in a transparent manner that takes into account the views of stakeholders.

3.95 However, certain changes have the potential to weaken the routes'/SO's ability to deliver, as well as undermining our ability to compare them and hold them to account. Ultimately, this risks undermining effective delivery to customers and funders.

3.96 In order to mitigate this risk, we have proposed a new condition in the network licence that will require Network Rail to comply with our Managing Change Policy when considering making relevant changes. This is intended to help ensure there is sufficient transparency and (where appropriate) discussion about changes before they happen.

3.97 The Managing Change Policy will focus on changes that could have the greatest potential to undermine the PR18 settlements. We are therefore principally concerned with changes that impact accountability and/or funding. Reflecting this, relevant changes can broadly be thought of as changes to:

- what a route or the SO is accountable for; and/or

- how much funding a route or SO has to deliver what it is accountable for.

3.98 We will be publishing our Managing Change Policy in November 2018. The objective of the Managing Change Policy is to achieve an appropriate balance between:

■ the benefits of Network Rail as a whole being able to respond flexibly (for example, to changing circumstances or balancing risks across the route businesses in England & Wales); and

■ the benefits of the settlements, in terms of:

– providing assurance to the routes/SO regarding their responsibilities and funding (allowing them to plan and manage their businesses); and

– providing the framework for us to hold the routes/SO to account, including through comparing performance across routes.

3.99 Changes within the scope of the Managing Change Policy include:

■ substantial organisational changes, in particular in the form of a substantial shift of responsibilities of the routes/SO;

■ route boundary changes (which will be more relevant to routes in England & Wales than in Scotland);

■ reductions in funding for individual routes/the SO, especially where the route/SO concerned does not 'agree with' the change (which, due to ring-fenced funding, will not be relevant to the Scotland route); and/or

■ changes to what a route is expected to deliver, for example, as a result of an enhancement decision.

3.100 To ensure our approach is proportionate, we distinguish between levels of change depending on the size of the impact of the change on outputs, funding and/or organisational structure, as described below. Our approach is summarised in Table 3.2.

Level I changes

3.101 The requirement on Network Rail, including the routes/SO, to inform us about Level I changes is intended to ensure that there is transparency around what a route/the SO is accountable for and the amount of money it has to deliver its requirements over the control period. This will help us to make comparisons between routes (and the SO, where relevant) and across the control period in a way that supports route-level regulation.

Level II changes

3.102 The requirement to discuss Level II changes with ORR is intended to give us an early signal that more material changes might be happening. This will then allow us to consider whether there might be any implications for the way we monitor and hold Network Rail, the routes and the SO to account (e.g. in our ability to compare across routes, in our reporting etc.).

3.103 Although the formal requirement to discuss these changes with us is new, in reality this is something that already happens. We envisage these discussions would make use of our existing communication channels that form part of our overall monitoring of Network Rail, and happen in parallel to its decision making process. These discussions should ensure that any concerns we have are raised early, giving greater certainty to the routes/SO during Network Rail's decision making process.

Level III changes

3.104 The requirement to seek our opinion will only apply to changes that would fundamentally alter what the routes/SO will deliver in the control period and/or the funding available to them (i.e. Level III changes). In these circumstances, we would expect Network Rail to discuss the changes with us in much the same way as above, but providing an opportunity for us to give a formal opinion on the change before a decision is made. This opinion would set out any concerns we have about the implications of the change. We would expect Network Rail, including the route/SO, to consider these points carefully when making a decision. Early discussion would need to include both parties agreeing a timeline in which our opinion will be provided, taking into account how this fits into the wider decision making process.

Exceptional changes

3.105 Our approach allows us to intervene in exceptional circumstances to prevent a change being made or to stipulate that it can only be made if certain conditions are met. This level of involvement would only apply if the change was so fundamental that it would undermine the route/SO level settlements in a way that could not be mitigated, as described in more detail below. This reflects the important role that comparison plays in improving outcomes delivered to operators, passengers and freight customers. Such intervention is expected to be very rare.

3.106 We are likely to judge a change as 'exceptional' when there is no reasonable means available to us, or Network Rail, to mitigate the serious impact of the change on our ability to use comparisons between the performance of the routes/SO in a way that provides incentives on the company to improve. In reaching our decision, we would take account of the benefits of the change, with reference to our statutory duties.

Table 3.2: Process requirements, by level of change

Process requirement for levels of change	Level I	Level II	Level III
Structured reporting requirements to increase transparency	✓	✓	✓
Assurance and/or requirements regarding wider transparency and governance		✓	✓
Publishing our formal opinion on the proposed change			✓

3.107 We are also proposing to amend Network Rail's network licence to deal with certain Level III changes that we would wish to prevent. This would apply to: (i) a narrow set of Level III changes where we have provided an opinion that we do not support the change ('an exceptional change'); and (ii) cases where the necessary Managing Change Policy has not been appropriately completed.

4. Review of Network Rail's SBP stakeholder engagement

Overview

This chapter sets out our assessment of the stakeholder engagement undertaken by the routes and the SO in developing their strategic plans for CP6.

Introduction

4.1 In this periodic review, we have put a particular focus on the importance of Network Rail routes/the SO undertaking good stakeholder engagement to inform the SBP. Good stakeholder engagement has helped the routes/SO to identify and meet their stakeholders' requirements, to the extent that is appropriate. It will have allowed them to use operators' railway expertise and understanding of operations, access and costs to make their plans more efficient, realistic and credible.

4.2 More meaningful engagement with local customers and stakeholders also reflects the recent transformation within Network Rail to devolve more responsibility from the centre to the routes/SO.

4.3 We discussed the role of stakeholder engagement in our February 2017 guidance to Network Rail on producing its SBP. In this, we set out some minimum expectations for what the routes/SO should do and included some principles of good stakeholder engagement that we said they should follow (these broadly relate to the engagement being inclusive, effective, well-governed and transparent). We also said the routes/SO should take account of stakeholder priorities (and if necessary balance these where there are trade-offs). However, we were generally not prescriptive in saying how the routes/SO should engage; rather, this was for the routes and the SO to decide, reflecting that they were well-placed to know what approaches would work best for their own stakeholders.

4.4 Given its importance, we said that we would assess the quality of each of the routes'/SO's SBP stakeholder engagement as part of our review. We have summarised the key points from our assessment below and in Table 4.1. This is set out in more detail in our supplementary document on stakeholder engagement.

Our assessment

4.5 Our assessment considered: the routes'/SO's strategic plans and accompanying supporting information; our direct observations of the routes'/SO's engagement; and feedback from Network Rail's stakeholders, including responses to our February

2018 invitation to comment on Network Rail's SBP and an independent [survey of stakeholders undertaken by Steer Davies Gleave (SDG)](#)[21].

4.6   In assessing the quality of the SBP stakeholder engagement, we were mindful that this was the first time that the routes/SO had developed bottom-up plans that have been informed by engagement with stakeholders; as such, there would be aspects of good practice and areas that could be improved.

4.7   This has indeed been the case. Overall, Network Rail's stakeholder engagement has received much greater focus and attention than before. Particular strengths were:

■   **there was a clear recognition of the importance of stakeholder engagement**. In their strategic plans, the routes/SO discussed their stakeholder engagement activities, and set out (to varying degrees) their approaches and how this influenced the plans;

■   **there was engagement with a good range of stakeholders**, including passenger and freight operators, national and local funders, passenger and freight end-user representative groups, local authorities and local enterprise partnerships (LEPs), although engagement with suppliers and freight end users was less consistent; and

■   **the routes/SO employed a variety of engagement methods**, including at least one stakeholder workshop per route/SO (though in some cases these were not open to all stakeholders) and in some cases several. Other approaches used included regular and ad-hoc bilateral meetings, existing multi-lateral meetings (such as Route Investment Review Group meetings), 'drop in sessions', questionnaires and emails. Some routes/the SO provided good evidence of taking a proactive approach to tailoring their engagement methods to different stakeholder groups, including by asking their stakeholders how they could make the engagement work for them.

4.8   We also identified areas for improvement:

■   **establishing more formally an engagement strategy and communicating this to stakeholders**. In some cases, engagement did not appear to stakeholders to proceed according to a clear plan and timetable, resulting in confusion about what would be shared when and how stakeholders could engage. This meant the engagement was less effective in delivering its objectives. However, there was some good practice among some routes/the SO

---

[21] Note that since the report was published, Network Rail has raised concerns over the accuracy of some stakeholder comments reported in it.

(for example, the South East route shared its stakeholder engagement strategy/plan with its stakeholders to explain how it would engage);

- **making more use of draft scorecards to facilitate engagement**. As discussed, the routes'/SO's scorecards will set out what they are seeking to achieve for their customers and how they are performing against that. In engaging with stakeholders on their strategic plans (including in the early stages of discussion), there may have been greater scope for the routes/SO to use draft CP6 scorecards to illustrate their different spending options, and their respective merits and trades-offs (e.g. nearer-term performance over longer-term network sustainability). This could have been particularly useful to demonstrate the impact of different spending options on train performance, which might also have facilitated agreement on specific performance trajectories as the plan developed (see paragraph 4.9 below for further discussion on agreement of performance trajectories). Similarly a clear timetable setting out how and when targets would be finalised might have helped this engagement process;

- **making more explicit trade-offs of competing stakeholder priorities**. For the most part, the routes/SO could have better set out in their plans how they had decided which stakeholder needs to address, including how they had traded-off competing priorities (i.e. where these could not be met given resource constraints) and how this translated into scorecard targets. In some cases, the plans did not clearly acknowledge the fact that some stakeholder needs would not be fully met in CP6. In other cases, the route/SO did acknowledge this but did not do enough to explain how it has decided to prioritise some needs over others. However, the London North East & East Midlands (LNE&EM) plan did explain what trades-offs the route was making, including the stakeholder priorities it would not pursue; and

- **giving stakeholders confidence that they can influence the plans**. Several stakeholders (including lead operators on routes) said that engagement activities were approached more as opportunities to communicate already-established plans to stakeholders, rather than for stakeholders to substantively influence the content and approach. Clearly, it is important that the routes/SO are open to changing their emerging plans as a result of their stakeholder engagement. They also need to be transparent in how they have done this, so stakeholders understand how their input has been taken into account.

4.9 Good stakeholder engagement will not always lead to unqualified agreement between the routes/SO and customers about what should be delivered. Indeed, this has been the case for measures relating to overall train performance. In the development of the CP6 SBP, routes and customers did not in most cases agree customer performance trajectories. We asked routes and operators to continue to

seek agreement following publication of our draft determination; however, agreement had been reached with only a small number of additional operators as of October 2018.

4.10 This reflected a number of factors, including the slow start the routes made in engaging with customers on detailed performance discussions, and that some operators were focused on the levels of performance that were underlying their franchise, rather than framing the conversation around what could realistically be delivered over CP6.

4.11 In its response to our draft determination, Network Rail disputed that earlier engagement and sharing draft scorecards would have resulted in greater agreement of performance trajectories. However, we remain of the view that an early start, accompanied by robust modelling, could have achieved a better level of agreement around the likely level of performance in CP6 and the factors affecting it – even if not agreement of the trajectory itself in every case. We also set out in our scorecard supplementary document our expectations around improvements to governance associated with customer agreement of scorecards.

4.12 The recent experience of route-customer engagement also serves to highlight a more general issue about the importance of the SO being actively involved in the franchising process. Where franchises are set against good quality advice from the SO on the levels of performance that are likely to be achievable, the differences between operator expectations and routes' view of what is achievable are likely to be smaller.

4.13 We have set out some key points from our review of the routes'/SO's SBP stakeholder engagement in Table 4.1 below. We have also assigned grades to the quality of stakeholder engagement by each route and the SO.

4.14 In addition to identifying different strengths and weaknesses of the routes'/SO's approach, our assessment also identified the different approaches pursued. This reflects their different stakeholders, geography and/or activities. We would encourage the routes/SO (and their stakeholders) to consider this in determining their approach to stakeholder engagement over CP6. This is discussed in full in our supporting document[22].

---

[22] We also commissioned SDG to produce advice to the routes/SO, which is intended to provide some practical suggestions on how they might derive most value from their engagement with stakeholders. See Running Stakeholder Engagement: Advice for Network Rail Routes and the System Operator, SDG, June 2018. This is available here.

Table 4.1: Summary of our findings on the quality of the SBP stakeholder engagement, by route/SO

Route / SO	Scope and methods of engagement	Recording and analysis of stakeholder priorities	Trade-offs of competing needs and line-of-sight to commitments in the plan
Anglia	• Showed a good understanding of its stakeholders • Tailored its approach	• Recorded all feedback received • Could have explained more clearly how stakeholder feedback was analysed	• Did not explain clearly how it traded-off competing stakeholder needs • Could have done more to demonstrate line-of-sight between stakeholder needs and its commitments
FNPO	• Engaged with a wide range of stakeholders • Had a well-managed approach, but did not communicate this well in the plan	• Presented research well • Could have explained more clearly how evidence informed the understanding of stakeholders' needs	• Did not explain clearly its trading-off of competing priorities • Could have done more to demonstrate line-of-sight
LNE&EM	• Showed a good understanding of its stakeholders • Explained well how/why it engaged • Could have set out a clearer strategy for engagement	• Set out a good list of stakeholders' needs and its response to them • Could have explained more clearly how it analysed stakeholder feedback	• Explained how it traded-off competing needs • Demonstrated a line-of-sight
LNW	• Engaged with a good range of stakeholders, including suppliers • Began engagement early and tailored its approach	• Maintained a detailed record of stakeholder comments • Could have been clearer about how it analysed these	• Used stakeholders' feedback to identify additional investment options beyond its base plan • Demonstrated some line-of-sight
Scotland	• Engaged with a wide range of stakeholders • Participated in the Scottish Ministers' HLOS engagement	• Set out a detailed list of prioritised stakeholders' needs • Could have been clearer about how its engagement led to this list	• Could have explained more clearly its trade-off of competing priorities • Sets out a line-of-sight between HLOS requirements and the plan, but not against all stakeholder needs
South East	• Adopted a formal stakeholder management plan • Hosted good quality workshops • Commissioned research on passengers' views on asset sustainability	• Recorded stakeholder feedback fully • Could have been clearer about how it analysed its stakeholder needs and how it presented this	• Demonstrated stakeholder input by setting out a 'vision' scheme and a constrained base plan • Could have done more to demonstrate the trade-offs and line-of-sight

Route / SO	Scope and methods of engagement	Recording and analysis of stakeholder priorities	Trade-offs of competing needs and line-of-sight to commitments in the plan
SO	• Engaged with a good range of stakeholders • Tailored its approach • Adopted an open and transparent approach	• Recorded and reflected on individual stakeholder needs • Some of the analysis of the stakeholder needs presented could have been clearer	• Explained how it intends to meet stakeholder needs • Could have been clearer about which stakeholder needs it will not meet, and why
Wales	• Showed a good understanding of its stakeholders • Tailored its approach • Could have ensured more consistent quality of engagement throughout the process	• Explained its process for analysing stakeholder needs well • Presented prioritised needs at a reasonably high level	• Explained reasonably well how it traded-off competing needs • Could have set out its reasoning in more detail in some places
Wessex	• Engaged with a wide range of stakeholders • Tailored its approach • Could have explained its engagement process more fully in its plan	• Adopted clear procedures for analysing stakeholder needs • Could have explained its reasoning in more detail	• Presented a clear line-of-sight diagram • Could have explained its reasoning in how it traded-off stakeholder needs
Western	• Engaged with a range of stakeholders • Tailored its approach • Explained its engagement activities well	• Adopted an explicit methodology to analyse stakeholder feedback • Presented stakeholders' priorities clearly	• Addressed each stakeholder need clearly • Could have given more detail on rationale for prioritising some stakeholder needs

5. Review of scorecards and requirements

Overview

This chapter summarises our final decisions in relation to scorecards and requirements in CP6.

Introduction

5.1 This chapter summarises our final decisions in relation to scorecards and requirements in CP6, including the CP6 baseline trajectories for key consistent route measures and the regulatory minimum floors for these. We reached these decisions by assessing:

■ what Network Rail's routes and the SO proposed to deliver in their strategic plans and subsequent targeted updates and responses to the draft determination;

■ whether overall these meet the requirements in the HLOSs of the Secretary of State and the Scottish Ministers; and

■ the issues raised and evidence provided by stakeholders in response to the draft determination, particularly by passenger and freight operators.

5.2 It is structured as follows:

■ our overall assessment of Network Rail's scorecards against our requirements;

■ our assessment of what Network Rail plans to deliver, including in respect of:

– train performance of passenger and freight services;

– network capability, network availability and network sustainability; and

– the FNPO and the SO.

Our overall assessment of Network Rail's scorecards against our requirements

5.3 In chapter 3, we set out our three main requirements for making greater use of scorecards in how we hold Network Rail to account, namely that: they are balanced; enable comparison; and appropriately reflect the requirements set out in the Scotland and England & Wales HLOSs.

5.4   In our draft determination, we set out our assessment of Network Rail's scorecards in the route plans against these requirements. In its response, Network Rail committed to address some concerns we had about transparency. We have set out below our final assessment of Network Rail's scorecards, in light of these commitments. We expect the updated scorecards included in Network Rail's delivery plan to reflect the decisions in this final determination.

Balance of scorecard measures

5.5   Overall, we were satisfied that the measures in the route and SO scorecards were broadly balanced across the range of activities that Network Rail undertakes, and reflected the interests of both current and future users. This is important, because the scorecards support the reputational incentives on the company and carry financial incentives for Network Rail's staff if they achieve the scorecard targets.

Scope for comparison between routes

5.6   The scorecards that the geographic routes have produced include: (i) measures agreed with their customers; and (ii) a set of common consistent route measures that enable comparison – including those required by us (to support comparison and reflect end-user outcomes) and those required by Network Rail itself.

5.7   As discussed in chapter 3, Network Rail has committed to producing a route comparison scorecard. This is a single scorecard that will show how the routes are performing in relation to each other, in respect of all the consistent measures and four end-user measures that do not appear on all route scorecards. All these measures are set out in Table 5.1 below and are discussed in more detail in our scorecards and requirements document. Those highlighted in bold are measures we have required, and the rest are Network Rail's own consistent measures.

Table 5.1: Network Rail and ORR's consistent route measures[23]

Area	Measure
Financial performance	Financial performance measure (FPM) – gross excluding enhancements (£m)
	Financial performance measure (FPM) – gross enhancements only (£m)
	Cash compliance – income & expenditure
Contribution to train performance	**Consistent route measure – passenger performance (CRM-P)**
	Consistent route measure – freight performance (FDM-R)
Safety	Lost time injury frequency rate (LTIFR)
	Train accident risk reduction measures
	Top 10 milestones to reduce level crossing risk
	Risk management maturity model (RM3) (in development)
Sustainability and asset management	Reduction in service affecting failures (SAF)
	Composite reliability index (CRI)
	7 key volumes of maintenance and renewals
	Top investment milestones
	Composite sustainability index (CSI)
End-user measures[24]	**Passenger satisfaction for the route**
	Passenger satisfaction with managed station(s)
	Use of the network – passenger
	Use of the network – freight

5.8 In its formal response to the draft determination, Network Rail committed to publish its route, SO and comparison scorecards on a quarterly basis, showing how the routes and the SO are performing against their targets and, for the geographic routes, against each other. Since submitting its response to our draft determination Network Rail has suggested that it should report on a twice-yearly basis, rather than quarterly. We note that it is open to Network Rail to make alternative proposals as the monitoring and reporting arrangements take shape ahead of, and through, CP6. We will give consideration to any changes, which should be subject to appropriate consultation with stakeholders.

5.9 In our draft determination, we identified a need for improvement in how routes define scorecard measures and Network Rail's overall governance of this. This reflected our concern that inconsistency in definitions and in how trajectories were being determined risked undermining comparison and transparency.

---

[23] We also think it is important that routes report against third party investment, but recognise that the nature of this investment may vary from route to route. As such, a consistent measure may not be appropriate. We will continue to work with Network Rail to develop an approach on this for CP6.

[24] These measures are not on all of the route scorecards, but they are included on the route comparison scorecard and reported consistently for all routes.

5.10 Network Rail committed in its response to improving its central governance and assurance processes around definition of measures, and to make sure there is a consistent level of stretch within trajectories for route consistent measures.

5.11 We welcome and accept these commitments, and expect this to be reflected in Network Rail's delivery plan and throughout CP6. We also require that there should be consistent definition and calculation of measures for recognised industry measures (such as the public performance measure (PPM), 'on time' or cancellations measures) as well as to consistent route measures (such as CRM-P). Where Network Rail creates measures that are bespoke to a route or operator, it should clearly define the measures and the source of data.

5.12 More generally, we expect appropriate levels of assurance to be in place to ensure consistency of reporting during the control period and over time. We will use independent reporters to provide assurance on this during CP6, should we consider this necessary.

Reflection of HLOS requirements on scorecards

England & Wales

5.13 The Secretary of State's HLOS focused on high-level outcomes, rather than prescribing detailed requirements. It highlighted the need for continued safe operation of the network, accepted our advice for increased volumes of renewals and expected Network Rail to work with its stakeholders to "determine appropriate metrics and stretching yet realistic target levels" of performance. In its response to our draft determination, DfT reiterated the importance of striking a balance between ambition and realism.

5.14 As discussed below, we have emphasised the role of customer-route discussion and agreement in setting target levels of performance, which will then form part of the evidence we use when assessing whether Network Rail is complying with its licence obligations.

Scotland

5.15 The Scottish Ministers published a detailed HLOS for Scotland. As is the position for GB as a whole, the Scotland route will be agreeing an annual route scorecard with its customers and funders, setting out what it will deliver.

5.16 We have worked with Transport Scotland and Network Rail to ensure that the HLOS requirements are incorporated into Network Rail's scorecard approach for the Scotland route, the SO and the FNPO. These requirements include: ScotRail, Caledonian Sleeper and freight train service performance; journey time improvements for ScotRail services; freight growth; delivering a Scottish gauge requirement; and reducing carbon emissions.

5.17 In addition to its scorecards, Network Rail has produced a single Scotland HLOS tracker to enable all parties to track its delivery of the requirements under the HLOS. This tracker will be used throughout CP6, and reflects our final decisions on the specific obligations on Network Rail, individually enforceable against the licence. More information can be found in our [Scotland settlement document](#).

5.18 When assessing Network Rail's delivery of these requirements we will take into account where the company is partly reliant on other parties to deliver. To support this, Network Rail will need to be clear on its own planned contribution. Each obligation will be subject to the reasonable practicability test[25] in Network Rail's network licence. We have also highlighted the areas where Network Rail needs to do more work on developing how the obligations will be measured. We will monitor progress as these are finalised before the start of CP6.

Our assessment of what Network Rail plans to deliver

5.19 The remainder of this chapter provides a summary of our conclusions in respect of four of the key outcomes that Network Rail delivers, namely: passenger and freight performance; network sustainability; network capability; and network availability. It also provides a summary of the role of scorecards in supporting delivery by the SO and FNPO.

5.20 Network Rail has also captured health & safety outcomes on its scorecards. While we welcome Network Rail's inclusion of these measures, which are a necessary feature of a balanced scorecard, our monitoring and enforcement of health & safety outcomes will continue to be against Network Rail's legal health & safety obligations.

Assessment of passenger performance

5.21 Our focus in our assessment of passenger performance has been on the proposed trajectories for the consistent route measure for passenger performance (CRM-P). CRM-P is a measure of Network Rail's contribution to passenger performance and is based on delay minutes[26].

5.22 For the Schedule 8 performance regime in passenger track access contracts, Network Rail's benchmarks will reflect the performance levels assumed in the CRM-P CP6 baseline trajectories[27].

---

[25] See licence condition 1 of Network Rail's current [network licence](#). We propose that this test will also be included in Network Rail's revised network licence for CP6.

[26] As discussed in chapter 2, CRM-P measures primary and reactionary delay minutes to passenger services caused by each Network Rail route, normalised per 100 train kilometres. It focuses on the delay that a route causes, rather than delay caused by train operators.

[27] Train operators' benchmarks in Schedule 8 will be based on past performance.

5.23 In order to forecast CRM-P, Network Rail established a number of models. These models used operator-level PPM trajectories as one of the inputs. PPM captures both Network Rail and train operator performance, and so is a reflection of the overall performance experienced by passengers.

5.24 We have reviewed Network Rail's SBP proposals. We assessed the robustness of each route's performance modelling approach and the level of challenge and stretch in the train operator and route CRM-P performance trajectories. This assessment informed our review of the changes to trajectories proposed by Network Rail in July, and in August 2018[28], which has informed our final decisions.

5.25 In our draft determination we required three routes (Anglia, Wessex and South East) to make adjustments to their proposed trajectories. For England & Wales, we asked routes and operators to continue to seek to reach agreement on trajectories for operator level measures, with NTF providing a continued role in facilitating this process. We said that routes should review the performance opportunities and risks identified by train operators. We also said that where a train operator remains unable to agree with a route's trajectory, and it could provide clear evidence that performance could be reasonably higher than the route is willing to agree to, we would review this and decide whether to use this evidence for the purposes of setting an appropriate CRM-P CP6 baseline trajectory.

5.26 Throughout the process our review has been supported by the independent reporter, Arup (with Winder Phillips), who provided assurance to us on the operational deliverability of the plans and trajectories, and on the models used.

England & Wales

Overall context

5.27 During CP5, overall train performance (measured in PPM) has been below the expectations that we set in PR13 and significantly below the levels that underpinned a number of passenger franchise agreements.

5.28 In terms of Network Rail's own performance, the number of delay minutes attributed to it in the first four years of CP5 was seven percent higher in England & Wales compared with the last four years of CP4. At the time of our draft determination and during periods 1 to 5 of 2018-19, performance has deteriorated further. This has impacted the CP5 exit position and what Network Rail considers it can deliver in the early years of CP6.

5.29 Since Network Rail's February 2018 SBP, and around the time of our draft determination, severe problems were caused by the May 2018 timetable change. We carried out an investigation into Network Rail's role in this, as well as a wider inquiry

---

[28] Network Rail also provided a further update in September 2018 which corrected a small number of errors.

at the Secretary of State's request into why the system as a whole failed to produce and implement an effective timetable. The outcome of the investigation and subsequent inquiry are set out in more detail here. We expect to make our recommendations in December 2018, following consultation with the industry and taking into account the rail review that the Secretary of State commissioned in September 2018.

5.30 This has introduced greater levels of uncertainty about what it is reasonable to expect of Network Rail in terms of its contribution to passenger delays. One particular issue is whether and how quickly we might expect the delays attributed to Network Rail to fall over time. There are different perspectives within the industry on whether one-off events such as extreme weather or the disruption caused by the May 2018 timetable change will reverse out; or if there is a long-term decline in performance, with these events unlikely to reverse-out fully in coming years. We have reflected on the available evidence when reaching our decisions.

Network Rail's performance models and trajectories

5.31 Our analysis and final decisions considered three related decisions:

- the appropriate trajectories for Network Rail's contributions to passenger delay as measured in CRM-P;

- whether there is sufficient agreement on customers' performance measures; and

- the appropriate level for the regulatory minimum floor.

5.32 As part of our assessment, we reviewed Network Rail's performance models, which informed both its customer performance trajectories and the route-level CRM-P performance trajectories. We reviewed these to ensure that performance trajectories were stretching and realistic. Network Rail confirmed to us that its final proposals, based on the modelling, reflect a 'P50' level of confidence (i.e. a route is as likely to achieve its CRM-P as it is to miss it).

5.33 Our assessment reflected the revisions to the trajectories set out by Network Rail in July and again in August 2018. Network Rail's final proposed trajectories reflected two sets of changes:

- those that we required in our draft determination; and

- additional change to reflect recent evidence on performance levels, notably the deterioration in the first five periods of 2018-19.

5.34 Network Rail stated that the revisions sought to provide a more realistic starting point to year 1 of CP6, while also providing a continued recovery through CP6.

5.35 The approach we took to our assessment (supported by Arup) is set out in more detail in our [scorecards and requirements document](#) and associated [Arup report](#). Our conclusion is that the route trajectories proposed by Network Rail routes are broadly realistic, although there are some significant uncertainties which are difficult to quantify.

5.36 We have accepted Network Rail's revised CRM-P trajectories for all routes except LNE&EM, where two operators provided quantified evidence that their operator-level trajectories should be different to those proposed by Network Rail. Table 5.2 sets out the CP6 baseline trajectories for each route.

Table 5.2: CRM-P baseline trajectories

Route	Our determination	2019-20	2020-21	2021-22	2022-23	2023-24
Anglia	Accepted[29]	1.44	1.44	1.43	1.43	1.43
LNE&EM	**Amended**	1.42	1.32	1.25	1.22	1.20
LNW	Accepted	1.70	1.62	1.58	1.56	1.53
South East	Accepted	3.03	2.98	2.88	2.84	2.81
Wales	Accepted	1.59	1.58	1.55	1.53	1.52
Wessex	Accepted	2.77	2.72	2.73	2.59	2.54
Western	Accepted	2.03	1.96	1.85	1.74	1.70

Extent of agreement on PPM and other customer measures

5.37 Separately, we asked routes to seek to agree five-year trajectories with their customers, covering CP6. Where there was agreement, we would place particular weight on these trajectories when monitoring and reporting on Network Rail. This would complement the monitoring and reporting against the CRM-P measure of performance.

5.38 Routes and passenger train operators were generally able to agree how to measure punctuality, reliability and severe disruption in a way that is appropriate to their particular circumstances.

5.39 We were concerned in our draft determination that CrossCountry should be reflected on geographic route scorecards where it has a material number of services. We are pleased that LNE&EM has addressed this (and also included a measure for Nexus). Anglia route has not included a measure for CrossCountry. As this raises the risk that the route fails to place sufficient weight on the needs of this operator, we will take account of this in how we monitor and hold the route to account.

---

[29] We accepted Anglia and Scotland's CRM-P trajectories but these were impacted by changes to LNE&EM CRM-P in year 3 (2021-22) and year 5 (2023-24) respectively.

5.40 The scorecards included by Network Rail in the England & Wales routes' strategic plans contain trajectories for each of the agreed measures. However, there was limited agreement on these five-year operator trajectories.

5.41 Our draft determination highlighted that this reflected, in part, the slow start that Network Rail made on detailed performance discussions, which it said was compounded by the SoFAs arriving later than expected.

5.42 In addition, some operators stated that they were unwilling to agree to performance trajectories that were below those underpinning their equivalent franchise requirements. We stated that, while it may not be desirable for performance levels to be below these requirements, the purpose of scorecard trajectories is to capture stretching but realistic target levels of performance. For the trajectories to provide effective incentives on Network Rail they need to reflect what can realistically be delivered.

5.43 As stated in chapter 3, when monitoring Network Rail's performance during CP6, we will place particular weight on customer performance trajectories that have been agreed by both parties. In this respect, we have included customer performance trajectories in our final determination for the following operators:

■ c2c (Anglia route);

■ Arriva Rail London (Anglia route);

■ Great Western Railway (Western route);

■ Merseyrail (LNW route); and

■ Caledonian Sleeper[30] (FNPO route).

Regulatory minimum floor

5.44 As discussed in chapter 3, a regulatory minimum floor marks the point below which we will be highly likely to undertake a formal investigation into whether or not Network Rail has breached its network licence. We have set a regulatory minimum floor for passenger performance for each route, for CRM-P.

5.45 In the draft determination we said this should be set at a consistent margin below Network Rail's target for each year of CP6 (i.e. the floor reflects the CP6 baseline trajectory). We also said it should be reflective of the point below which we had typically investigated passenger performance issues in the past. In light of this we said the margin should reflect a performance level of 20% of the average

---

[30] A top-down target was set in the Scotland HLOS for Caledonian Sleeper.

performance for each route in CP4 and CP5. We have reviewed the methodology further in light of the responses to our draft determination consultation.

5.46 Our final decision is to link the performance floor to forecast route performance levels, with the floor being calculated at a 20% margin of the CP6 trajectories. In contrast to Network Rail's and our original proposals, this approach is forward-looking. Consequently, it provides a margin which is focused on future expected performance and results in a consistent level of challenge between routes.

Table 5.3: Regulatory minimum floors for CRM-P

Route	2019-20	2020-21	2021-22	2022-23	2023-24
Anglia	1.73	1.73	1.72	1.72	1.72
LNE&EM	1.68	1.58	1.51	1.48	1.46
LNW	2.02	1.94	1.90	1.88	1.85
South East	3.61	3.56	3.46	3.42	3.39
Wales	1.90	1.89	1.86	1.84	1.83
Wessex	3.30	3.25	3.26	3.12	3.07
Western	2.40	2.33	2.22	2.11	2.07

Scotland

Overall context

5.47 In CP5, the Scotland route's performance target has been for ScotRail's PPM to be 92% for the first four years of the control period, and 92.5% in 2018-19. In practice however, while the moving annual average for PPM briefly reached the 92% target in 2014-15, it has not been higher than 91.6% since then. However, it has been generally better than England & Wales, with Scottish train operators' overall PPM in the first four years of CP5 being 90.2% compared with 88.4% for England & Wales train operators.

5.48 We concluded in 2015 that Network Rail had not done everything reasonably practicable to achieve the target. In 2016, the Scotland route and ScotRail (through their ScotRail alliance) published a performance improvement plan. We have since been monitoring this closely to be assured that all aspects of that plan are being delivered.

HLOS requirements and the scorecard

5.49 In their HLOS, the Scottish Ministers set performance targets of 92.5% PPM for ScotRail services and 80% for right time arrivals (RTA[31]) of Caledonian Sleeper services. The HLOS also required that the outputs of the network be maintained "in

---

[31] RTA measures the percentage of trains arriving early or within 59 seconds of schedule.

such a way as to recognise the performance requirements of other operators on the Scottish network".

5.50 The Scotland route's February 2018 strategic plan, included the HLOS requirements mentioned above in its scorecard. It also included a CrossCountry right time departures target of 85.5% by the last year of CP6 and, in line with our requirements, a CRM-P trajectory. However, it made clear that it considered achieving the HLOS targets would be challenging, particularly in the early years of CP6.

5.51 Given this, the ScotRail Alliance commissioned an independent review of performance in Scotland. This set out a number of recommendations to improve performance, which the Scotland route has accepted. However, the Scotland route did not consider that these would provide an immediate impact on performance. As such, it considered that it would achieve 91.5% PPM in the first year of CP6, one percentage point short of the target. We concluded that the PPM target for ScotRail can be set equal to the HLOS requirement, at 92.5% across CP6, but highlighted that if it failed to achieve this, we would take into consideration how the route was implementing these recommendations.

5.52 Since our draft determination the Scotland route has further revised its expected trajectory. It now does not expect to achieve 92.5% until the third year of the control period. We are concerned that the improvement plan has been underway for six months but there have been no clear signs of performance improvement, and so we have recently commissioned an independent reporter to review this.

5.53 Our final decision remains that Network Rail is required to deliver an HLOS target of 92.5% for each year of CP6. If the Scotland route fails to deliver this target, we will take into account its implementation against the independent review when considering whether it has done everything reasonably practicable to achieve 92.5%, along with the other steps it has said it will take to improve performance. Given that ScotRail's own performance also contributes to the PPM target, we will also take into account its contribution to achieving the target relative to that of Network Rail.

Table 5.4: Scotland operator targets for CP6 (reflecting HLOS requirements)

Measure	2019-20	2020-21	2021-22	2022-23	2023-24
ScotRail (PPM)	92.5%	92.5%	92.5%	92.5%	92.5%
Caledonian Sleeper (right time)	80%	80%	80%	80%	80%

CRM-P baseline trajectory

5.54 Reflecting that there are specific HLOS targets for passenger performance in Scotland (whereas there are none in the England & Wales HLOS), the role of the CRM-P CP6 baseline trajectory will be different in Scotland.

5.55 In particular, while we will hold the route to account against its PPM and RTA targets (as described above), in the event of performance being below expectations, we will use CRM-P to provide further insight on the route's contribution to overall performance (reflecting that CRM-P records Network Rail caused delay only).

5.56 As is the case across GB, CRM-P will also facilitate comparison with other routes, thereby providing useful information about how routes are performing. Reflecting this, the CRM-P trajectory needs to be set on a consistent basis as in the England & Wales routes, and reflect the expected performance. We accepted the Scotland route's proposed CRM-P, but there was a consequential impact on the last year of CRM-P as a result of decisions we made in relation to LNE&EM. Our final determination in respect of CRM-P for Scotland is set out in Table 5.5.

Table 5.5: CRM-P for Scotland

Measure	2019-20	2020-21	2021-22	2022-23	2023-24
CRM-P	1.06	0.96	0.89	0.89	0.88

Regulatory minimum floor

5.57 We consider it appropriate to set a regulatory minimum floor in Scotland, even though there are specific PPM and RTA targets required by the HLOS that we will be holding the route accountable for. In particular, the floor will provide comparable protection for passenger operators running between England and Scotland (i.e. other than ScotRail).

5.58 As discussed above, we have identified an improvement to the methodology for calculating the regulatory minimum floor, and so it will be set at a 20% margin below the CP6 trajectories.

Table 5.6: Regulatory minimum floor for CRM-P in Scotland

Route	2019-20	2020-21	2021-22	2022-23	2023-24
Scotland	1.25	1.15	1.08	1.08	1.07

Network Rail's management of reactionary delay caused by train operators

5.59 CRM-P focuses on delay caused by Network Rail. It does not reflect reactionary delay from train operator-caused incidents. Network Rail, as infrastructure manager and SO, is responsible for recording and managing delay from all incidents regardless of cause and culpability. There is a risk that our monitoring of CRM-P could have the unintended consequence of reducing the relative attention given by Network Rail to management of reactionary delay caused by others, which would not be in the interests of passengers or freight.

5.60 Network Rail reports reactionary delay to NTF (which reviews this) and other industry groups. Network Rail said it intends to increase the visibility of this reporting within

the company and with train operators in CP6 (as set out on page 12 of its SBP summary document).

5.61 In our draft determination, we required Network Rail to go further by reporting this publicly in CP6, including comparative information about reactionary delays by cause and operator type. Network Rail agreed with this in its response and said it would publish this in its annual return. We were concerned that this would not provide sufficient focus on this important issue, and we require it to publish this in a separate, dedicated report. We also require this report to include cancellation data.

5.62 We continue to consider that accountability for the reporting could sit with the SO (noting that while it only contributes to levels of reactionary delays, it could have a role in reporting across routes through its annual narrative report), or elsewhere in Network Rail.

5.63 As set out in our summary of responses document, some respondents raised concerns about the link between appropriate management of reactionary delay and cancellations. Similarly, recent performance problems have impacted on the level of cancellations. As with reactionary delay, we require Network Rail to review and manage this area proactively.

5.64 In CP6, we will review levels of reactionary delay and cancellations through our regular monitoring and may intervene if evidence emerges that Network Rail is not adhering to its commitments to manage these issues effectively, regardless of cause.

Assessment of freight performance

CP5 context and HLOS requirements for CP6

5.65 The devolved structure of Network Rail gives the FNPO responsibility for overall freight performance across the network, and geographic routes responsibility for freight performance within their routes.

5.66 In CP5, we set Network Rail a network-wide target of 92.5% against FDM[32]. Network Rail has consistently outperformed this throughout CP5, and the FNPO has forecast that Network Rail will end CP5 at 94.0%.

5.67 The Scottish Ministers' HLOS set a specific FDM target for freight services in Scotland of 93% from the start of CP6, increasing to 94.5% by the end of CP6. For England & Wales, the Secretary of State's HLOS expected 'stretching yet realistic' targets to be agreed.

---

[32] FDM measures the percentage of freight trains arriving at their destination within 15 minutes of scheduled time, covering delays for which Network Rail is responsible.

Network Rail's freight performance proposals

5.68 In terms of engagement to inform its proposals, the FNPO reached overall agreement with freight operators on how to measure the key aspects of freight performance on scorecards. It also discussed drafts of the CP6 scorecard with freight operators. While there was a lack of clarity about changes made to the FDM trajectory for CP6, there was broad agreement about the overall level of performance that should be delivered. More information on this engagement is set out in the FNPO's settlement document.

5.69 Operators were supportive of using FDM as a network-wide metric on performance. Network Rail has developed a further metric, FDM-R, as a consistent route measure. This measures the number of FDM failures that each route has contributed to in the GB-wide FDM figure[33].

5.70 In its strategic plan, the FNPO proposed to deliver a network-wide FDM of 94.0% throughout CP6. All geographic route plans included a trajectory for FDM-R; these should be sufficient to deliver the national FDM baseline trajectory. These were not revised by Network Rail in its response to the draft determination. They are set out in Table 5.7 below.

Network Rail's freight performance trajectories

5.71 Given the Secretary of State's HLOS requirement that targets for England & Wales be "stretching yet realistic", we considered whether the 94.0% figure overall would be consistent with this and whether the FDM-R route targets in England & Wales would collectively support it.

5.72 We considered whether 94.0% FDM might appear somewhat conservative, given the current forecast for the end of CP5 mentioned above. We noted that there were various factors to suggest that it was not. In particular, forecast changes in the mix of freight traffic[34] and increases in passenger traffic and related congestion will put pressure on freight performance levels. Taking this into account, and the fact that we did not see material evidence in our review or in the responses to the draft determination to warrant us requiring a higher trajectory, we have concluded that a national 94.0% FDM trajectory would be sufficiently stretching.

5.73 The way that FDM-R is calculated has been changed by Network Rail to make it more accurate. The FDM-R targets in the SBP, and reflected in our draft

---

[33] 'FDM-R' is a measure of all Network Rail caused delay minutes contributing to FDM failures (delays greater than 15 minutes) on an individual route. An individual route's FDM-R is a proportional measure of the contribution of each route to national FDM failures, weighted by the proportion of freight services that have run on that route.

[34] That is, a further forecast reduction in coal traffic – a traditionally high performing flow – and higher volumes of other traffic that tends to have relatively poorer performance.

determination, had been calculated using the original methodology. Reporting against this measure will be against the revised methodology. As such we decided that it would be more appropriate for the FDM-R CP6 baseline trajectories to be based on the revised methodology, at a level of challenge consistent with our draft determination, on the proviso that this is sufficient to deliver national FDM.

5.74 The Scotland HLOS required an FDM for Scotland of 93% at the start of CP6 moving through staged improvements towards 94.5% at the end of CP6. We propose to reflect the HLOS requirement in the form of FDM-R. This is on the basis that FDM is a GB-wide measure, whereas FDM-R reflects a route's impact on the GB-wide FDM measure. The Scotland route proposed to deliver an FDM-R of 94.5% in each year of CP6, which is somewhat higher than the HLOS requirement in the first year. On balance, we consider that Network Rail's obligation should be framed in relation to the HLOS requirement, although we recognise the aim to outperform in the early years.

Regulatory minimum floors

5.75 The FNPO proposed a regulatory minimum floor for national freight performance of 92.5% FDM (equivalent to the CP5 target) and the geographic routes proposed floors at a level below their trajectories that reflected an additional 30% of FDM failures.

5.76 We could not apply a similar test to the proposed freight floors as we did to the passenger floors, as there were no previous cases of us launching investigations into poor freight performance based on FDM and FDM-R.

5.77 However, we were satisfied that the proposals were reasonable, given that:

■ the GB-wide performance floor is set equal to the CP5 target, which implies that we would be likely to investigate freight performance if national average performance in CP6 was below the CP5 target level;

■ the number of freight services on the network means that a 20% floor may be triggered more frequently than for the passenger equivalent; and

■ while the route performance floors were arguably set at a lower level than for passenger services, the traffic mix and performance will likely vary more significantly at the route level. Further, the existence of an additional national regulatory minimum floor provides additional comfort that there is a reasonable balance of incentives at national and route level.

Table 5.7: FDM and FDM-R CP6 baseline trajectories and regulatory minimum floors

	FDM-R for geographic routes (for final year of CP6)								FDM FNPO
Location	Anglia	LNE &EM	LNW	Scotland	South East	Wales	Wessex	Western	GB
Baseline trajectory	93.1%	95.1%	94.2%	94.5%	88.4%	94.8%	94.6%	93.7%	94.0%
Floor	91.3%	93.9%	92.7%	92.5%	85.4%	93.5%	93.1%	92.1%	92.5%

Network capability

5.78 The capability of the network to accept different types of rolling stock (operating in particular ways) is an important element of what Network Rail delivers to operators. It is a particular consideration for freight operators, who use a range of rolling stock, operate nationally and respond to changing patterns of demand. In CP5, we set a minimum baseline for network capability (covering track mileage and layout, line speed, gauge, route availability and electrification type).

5.79 We have been concerned with how well Network Rail has been managing network capability in CP5 and are aware of concerns raised by stakeholders on this. Indeed, the Scottish Ministers included a specific HLOS requirement regarding gauging and, in response to this, the Scotland route has said it will have a gauging strategy in place for the start of CP6. This is discussed further in the Scotland summary.

5.80 The independent reporter review has highlighted some concerns over the reporting of network capability in CP5 and also outlined some recommendations for monitoring and assessing network capability in CP6. We are engaging with Network Rail on the development and implementation of these recommendations.

Network availability

5.81 While we do not plan to set a specific delivery requirement for network availability, we will monitor Network Rail's performance in this area. Network Rail must continue to provide appropriate reporting to us and its customers regarding availability of the network. We will continue to work with Network Rail to establish an appropriate suite of measures to monitor and assess the availability of the network in CP6.

Network sustainability

Context

5.82 Maintaining a sustainable asset base is vital to the interests of users and funders. It ensures the safety, reliability and value for money of the network over the long-term.

5.83 In CP4, Network Rail deferred significant planned renewals, and did so again in CP5. We have previously raised concerns about this in our reporting and reflected this in the advice we gave to DfT and Transport Scotland in 2017. Chapter 7 discusses the forecasts for asset sustainability during CP6.

5.84 Reflecting our concerns in this area, we said we would require Network Rail to include a network sustainability[35] measure on geographic route scorecards and that we would set a regulatory minimum floor for it.

Network sustainability measure

5.85 Network Rail has been developing a new methodology for measuring asset sustainability, but this needs more development and testing before it can be used. Network Rail has provided a plan to us for how it intends to do this.

5.86 We consider that the CSI measure is currently the most practical existing option for assessing network sustainability. In simple terms, CSI measures the 'remaining asset value' on the network (with value reflecting the remaining useful life of the asset), weighted by the relative value of the asset.

5.87 CSI is an aggregate measure. It includes around 80% of asset types but excludes some important assets such as light maintenance depots. Because of this, routes should not seek to drive increases in the CSI score at the expense of those assets that do not contribute to the CSI calculation. As set out below, our monitoring will not focus solely on CSI.

Network Rail's network sustainability trajectories

5.88 We were concerned that Network Rail's SBP implied a forecast decline in levels of sustainability for over CP6 and in the longer term. Network Rail's February 2018 SBP did not adequately address this trend. In general terms, routes justified this decline on the grounds that they had prioritised safety and performance over sustainability.

5.89 In our draft determination, we asked Network Rail to allocate around £1bn of additional spend to renewals work to improve sustainability, and to update its sustainability trajectories accordingly. In response, it provided a prioritised set of schemes to us in July 2018 along with an estimate of the impact of these on CSI.

5.90 Network Rail provided a final proposal in its full response to our draft determination on 31 August 2018; this reflected its position that the similar level of sustainability could be achieved in CP6 with a lower level of additional spend.

5.91 As described in our review of Network Rail's proposed costs, we have accepted Network Rail's revised proposal, including the revised CSI trajectories that Network Rail proposed.

---

[35] By sustainability, we mean delivering sufficient renewals to counter the on-going deterioration of network assets through ageing and wear-out in order to protect the interests of future users and funders.

Regulatory minimum floor

5.92 In our draft determination, we accepted Network Rail's proposed methodology for the regulatory minimum floor. This was based on measuring delivery of the routes' planned renewal volumes, with the threshold of the floor being set at 90% of a route's planned volumes over a control period. It also proposed that it would support this through its own annual floor of 85%.

5.93 However, while we were content with the proposed levels, we were concerned that this approach (measuring delivery of renewal volumes) would be input based, and could have unintended consequences by providing an incentive simply to undertake more work, rather than to focus resources on work that has the most impact on asset sustainability as an outcome. Reflecting this, we said that the measure and the floor should both be output based.

5.94 Our final decision is that the floor methodology should remain unchanged. However, the floors have been recalculated to reflect the revised CSI trajectories, as set out in Table 5.8 below.

5.95 Consistent with our approach generally, we may take action even where the floor has not been breached. We will rely on a wider suite of indicators in our monitoring of network sustainability, including annual route level asset reporting.

Table 5.8: Network sustainability (CSI) trajectories and floors*

Route	End CP6 (%)	Regulatory Minimum Floors End CP6 (%)
Anglia	-1.8	-2.6
LNE&EM	-1.6	-2.0
LNW	-3.5	-3.7
Scotland	+2.6	+2.1
South East	-3.9	-4.8
Wales	-0.9	-1.2
Wessex	-4.8	-5.3
Western	+1.6	+0.8

*Values measure the cumulative change against the start of CP5 baseline.

FNPO

Context and the FNPO's strategic plan

5.96 The FNPO differs from the geographic routes, as it is not responsible for managing any operational assets, nor does it control the movement of trains. Instead, its role is to represent the interests of a number of customer groups – including freight and national passenger operators (including charter train operators and operators with plans to run open access passenger services) – which operate a significant

proportion of their services across a number (and, in some cases, the majority) of Network Rail's geographic routes.

5.97 Reflecting this, much of its role is focused on stakeholder engagement, advocacy and resolving issues as they arise. As such, many of its proposed commitments in CP6 are hard to quantify.

5.98 The FNPO's plan committed, among other things, to support freight growth, increase average freight train speed (addressing a Scottish HLOS commitment) and develop the strategic freight corridors to boost performance. In addition to this, the FNPO committed to performance targets for:

- freight (including national FDM, as discussed above); and

- national passenger operators Caledonian Sleeper (a 80% RTA measure – a Scottish HLOS requirement) and CrossCountry.

5.99 In response to our draft determination, for the FNPO, Network Rail confirmed that all measures within its strategic plan had been confirmed and it had removed all 'TBC' references. These changes will be included in an updated iteration of the FNPO plan that will be shared with stakeholders.

Our decisions

5.100 Overall, we consider that the FNPO scorecards provide a good basis for monitoring and providing incentives on those aspects of performance that can be quantified.

5.101 The FNPO is accountable for delivering some of the Scottish Ministers' HLOS requirements. The FNPO needs to provide more details on the specific steps it will undertake to meet the specified requirements of the Transport Scotland HLOS and provide assurance of its delivery. These specific requirements are set out in more detail in our final determination - summary of conclusions for Scotland and the Scotland HLOS tracker.

5.102 In light of the UK Government's decision to extend the current CrossCountry franchise, Network Rail will need to work closely with the current franchise holder to develop targets and metrics for CP6 to support its franchise commitments and work closely with DfT in the development of future franchise requirements.

5.103 We remain concerned about the general lack of transparency and clarity about the governance arrangements relating to the FNPO, which are also important in the context of understanding what happens to support delivery against scorecard commitments and what happens if things go wrong. Reflecting this, we require the FNPO to publish (and maintain) a document that explains how Network Rail's wider governance interfaces with the FNPO.

5.104 The FNPO has also committed to undertaking further reporting on its contribution to meeting its stakeholders' requirements, including through an annual report and supporting stakeholder engagement. More information about the governance arrangements and additional reporting is included in the [FNPO settlement document](#).

System Operator

Context

5.105 The SO was established as a specific business unit within Network Rail in 2017 (although the functions that comprise the SO were part of Network Rail before the SO was formally established). The SO has responsibility for overseeing the effective planning and coordination of the rail system; a particularly key role given the devolved framework within Network Rail. Since 2015, we have worked closely with it to develop our approach to regulating it in CP6. Our review of its strategic plan and its scorecard, set out in more detail in our [final settlement document for the SO](#), has built on this.

5.106 Our review took place in the context of recent problems with the late finalisation of the May 2018 timetable that has caused substantial disruption to passengers through cancelled and delayed services. We investigated these issues and found Network Rail in breach of its licence, and [set out](#) four immediate actions for Network Rail (primarily for the SO) to deliver.

5.107 We are also undertaking a broader [inquiry](#) into the factors that contributed to the failure to produce and implement a satisfactory working timetable in May 2018. This inquiry has now produced an [interim report](#), setting out our findings into the causes of the disruption. The inquiry will make its recommendations in December 2018, and we expect the SO to reflect the lessons learnt in its plans during CP6.

The SO's strategic plan

5.108 The February 2016 CP6 plan set out how the SO would improve the capacity and capability of its timetable resources, including recruiting more staff and investing in additional systems. Network Rail has accelerated some of these actions, such as bringing forward the recruitment of additional timetable planners, which it does not expect to materially impact on its plans for CP6. However, the recommendations from the inquiry and from Network Rail's '100-Day Plan programme' may necessitate the SO to consider whether its plans for CP6 will need to be revised to reflect these recommendations. There may also be implications for how we reflect the SO's role in Network Rail's network licence, which we will consult on in December 2018. Some of these changes may fall under our Managing Change Policy.

5.109 In its strategic plan, the SO proposed:

- a more iterative and 'modular' form of strategic planning, analysing the future needs of the network and working with industry to advise funders on the options for how the network should develop over the longer-term. This should be better aligned to key franchising and rolling stock decisions and informed by more effective stakeholder engagement;

- an improved provision of advice to a wider number of funders relating to future projects and franchising decisions;

- a more accurate and resilient timetable that is provided to industry in a more effective manner; and

- more automated timetable processes and a move towards 'per second' timetabling (rather than the current practice of planning the timetable in 30 second increments) through increased investment in its technological capabilities.

5.110 To enable stakeholders to hold the SO accountable for its delivery, the SO has proposed to report its performance by way of a three-tiered scorecard structure. This is intended to reflect different aspects of its performance in different parts of the network. It also proposes to report on its performance through an annual narrative report, which will discuss the SO's performance in activities that do not lend themselves to quantified measurement, including discussions on the quality of the SO's work.

5.111 In addition, the SO is proposing a new external governance framework to enable stakeholders to influence the SO's priorities and, where necessary, to challenge its performance. This includes the establishment of an SO Advisory Board, which includes industry and funder representation, to provide challenge and strategic steer on the SO's performance[36].

Our review

5.112 Across responses to our draft determination, stakeholders were broadly supportive of our requirements on the SO. These are largely unchanged below, with only minor alterations.

---

[36] This body is explained in more detail on page 12 of the SO's 'about us' document.

5.113 We require the SO to deliver the following commitments that it has made as part of its strategic plan, namely to:

- **report on its performance through the (national) tier 1 scorecard, as well as the tier 2 (directorate level) and tier 3 (geographically disaggregated) SO scorecard structure**. The SO should also set out what each measure means (e.g. what data it is based on) so that its stakeholders can interpret what the scorecards are saying about the SO's performance;

- **produce and publish an annual narrative report** to explain those elements of its performance that do not lend themselves to scorecard reporting, and to reflect on the quality of its service and areas for improvement. To ensure the report is sufficiently comprehensive, we require the SO agree the content of its annual report with its Advisory Board; and

- **embed the external governance framework[37] as set out in its strategic plan and in line with its May 2018 supplementary letter** to enable stakeholders to influence the SO's priorities and, where necessary, to challenge its performance. There **should be a means for the Advisory Board chair and the ORR to have direct and regular dialogue** to enable ORR to use the new governance framework in the way we monitor the SO over CP6.

5.114 In addition, we are also requiring that the SO:

- **is accountable for developing an industry plan (by 30 November 2018 for ORR review, and finalised by 31 March 2019) to deliver the passenger and freight journey time requirements set out in the Scottish Minister's HLOS[38],** working with other parts of Network Rail (including the Scotland route and the FNPO) and with industry and government stakeholders;

- **is accountable for overseeing the delivery of the actions set out in the industry plan to improve journey times in Scotland** according to the timescales stated in the plan (subject to any amendments we might make following our review)**, and for reporting on progress** (including through the use of scorecards across SO, FNPO and the Scotland route). Other parts of Network Rail will also be responsible for delivering elements of the plan, and the SO will lead Network Rail's delivery of its actions;

---

[37] Including the SO Advisory Board and the two standing advisory groups.

[38] Those requirements are to deliver a ScotRail minutes per mile target of 1.587 by December 2019 and 1.576 by December 2024 and a freight speed increase of 10%, by December 2024.

- **must implement the actions it has identified to address the recommendations from the Nichols review[39] of the SO's capital expenditure controls and processes** to ensure that it can deliver its proposed around £60m of investment in its systems; and

- demonstrate that it has **taken account of lessons learnt from the May 2018 timetable change**, including recommendations from our inquiry into why the system as a whole failed to produce and implement an effective timetable. With the SO, we will consider how best it can report on its work to improve the timetabling process during CP6.

5.115 These requirements and our approach to regulating the SO in CP6 should support industry's desire for an expert, transparent and impartial SO that acts in the best interests of the system as a whole, favouring neither operators nor Network Rail in its decision making.

---

[39] To provide assurances that the SO is well equipped to deliver its capital expenditure programme in CP6, we commissioned (jointly with Network Rail) an independent reporter study, undertaken by Nichols, to consider whether the SO's processes and controls for capital expenditure are suitably robust.

6. Health & safety

Overview

This chapter provides an overview of our assessment of health & safety issues in the SBP and Network Rail's response to our draft determination.

Introduction

6.1 A key part of our assessment of the SBP is considering whether – if implemented – it would allow Network Rail to continue to operate its network safely and in line with its legal requirements. This chapter summarises our health & safety assessment and sets out the key decisions we have made in this area.

6.2 Our more detailed assessment is set out in our final determination supplementary document on [health and safety](#).

Context and legal framework

Health & safety legislation

6.3 Network Rail has legal duties[40] to ensure the safety of employees and others affected by its undertaking. It must assess the risks arising from its activities, and identify and implement controls to eliminate or prevent them.

6.4 Most health & safety legal duties are required to be carried out 'so far as is reasonably practicable'. This test requires a control measure to be implemented unless an employer can demonstrate that the cost and effort required to do so is grossly disproportionate to the risk being addressed. This test is sometimes referred to as 'ALARP', meaning the risks have been reduced to 'as low as reasonably practicable'. Affordability is not part of the test of reasonable practicability; it is whether the amount of trouble, cost, disruption and physical effort to mitigate a risk is proportionate.

The Secretary of State's HLOS

6.5 Within the devolved legal framework for periodic reviews, the Secretary of State retains responsibility for safety for GB as a whole. His HLOS, which set out his overall requirements for the railway in CP6, said:

> "The Secretary of State considers the continued safe operation of the railway to be vital. He recognises the good standard of safety achieved by the control of risk

---

[40] Under the Health and Safety at Work Act etc. 1974 (and subsequent regulations). Its general duties under this are made specific to the railway environment in the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS).

across the rail industry and seeks for this to continue…He is not specifying any particular safety initiatives and would expect risk control to be attained through existing processes and funding."

6.6 So, while for CP5 there were specific requirements and ring-fenced funding relating to safety that we had to take account of in our PR13 determination (such as in respect of level crossings), in PR18 our review of the SBP has focused on whether it was legally compliant. That is, delivering what is reasonably practicable.

Our expectations for health and safety in CP6

6.7 In our SBP guidance to Network Rail[41], we set out our expectations regarding health & safety management in the SBP. This included the requirement for it to set out how it would implement its health and safety strategy, which it established during PR13. This strategy spans both CP5 and CP6.

Our assessment of Network Rail's plans for CP6

Our approach to the assessment

6.8 Our assessment of the SBP built on the work of our safety inspectors during CP5. Our review itself included a range of meetings with Network Rail, including those on specific assets, which ORR safety and engineering staff attended together as part of a joined up safety and economic regulatory approach.

Our main findings

6.9 Overall, our scrutiny of the SBP found evidence of growing maturity in Network Rail's management of health & safety. It has matured in its vision to deliver its health & safety strategy, with its 'Home Safe' plan well established as the means to do this, alongside its Train Accident Risk Reduction programme to address precursors to catastrophic risk. It has set itself a challenging overall LTIFR[42] target of 0.17 by 2023-24 to reduce workforce injuries in CP6 and it is promoting the use of RM3[43] across the routes as a tool for securing excellence.

6.10 Although it now has a devolved structure, Network Rail (at a corporate level) remains the single duty holder for legal safety obligations. In PR18, we have been challenging

---

[41] Paragraphs 70-72, Guidance on Network Rail's strategic business plans, ORR, February 2017.

[42] The 'lost time injury frequency rate' is the number of lost time injuries occurring in a workplace. The Network Rail measure is the number of lost time injuries per 100,000 hours worked, although many other industries calculate it as per one million hours worked. At period 6 in 2018-19, the LTIFR was projected to be 0.32 at the end of CP5. This is an overall figure, with substantial variations between routes and Infrastructure Projects. All routes have a target of 0.17 for end of CP6. Network Rail maintains its way of calculating LTIFR so that it has a consistent means of measuring trends – but it means comparison with other sectors is not straightforward.

[43] RM3 describes what excellent management capability would look like for the key elements of an organisation's health and safety management system as measured against five maturity levels.

it on how it will balance its overall legal accountability with a structure that allows for the devolved management of risk at route level. We considered that the various business plans each described this matrix framework well. There are clear lines of accountability, and a distinction between mandatory company standards and areas where routes are free to innovate and decide their own approach. We will continue to scrutinise how well this framework is implemented throughout CP6.

6.11 Further, we found that Network Rail's own assurance activities across the business, led by STE, have been robust, resulting in progressive challenge to route proposals and securing improved arrangements. This is a positive development, which we welcome.

6.12 That said, we found that there were varying levels of ambition, maturity and understanding of health & safety in the individual route business plans and those of the central functions. In particular, there needs to be an evolution in routes' understanding of what 'so far as is reasonably practicable' means for their investment decision-making.

6.13 Some routes appeared to rule out reasonably practicable spend based on affordability, without further explanation. We challenged some of these decisions in our draft determination and received a favourable response from Network Rail. This has not resolved all questions of what might be reasonably practicable, and work remains to be done by Network Rail to improve understanding amongst route staff. Nonetheless, the matrix framework has the potential to drive improvements in maturity and understanding across Network Rail.

6.14 While we considered that the SBP has the potential to deliver continued safety of the network, we had some particular concerns in respect of asset management, level crossings and the FNPO workforce safety.

Asset management

6.15 Asset management is a key component of Network Rail's licence condition regarding stewardship of the network. Our broader findings and decisions on this are discussed in chapter 7. Reflecting that effective asset management is key to controlling many of the precursors to catastrophic risk on infrastructure, it was a major focus of our review of health & safety in the SBP.

6.16 In England & Wales, while the Secretary of State had provided additional funding for renewals in his SoFA, Network Rail's SBP did not include the volumes of renewals that its modelling indicated would be needed to maintain asset condition. We challenged Network Rail on whether risk control could be maintained despite this.

6.17 It said that it had targeted its available funding at those assets prioritised by risk, so that renewal brings the greatest control benefit. However, Network Rail acknowledged it had residual concerns regarding structures and earthworks.

6.18 On earthworks, STE had advised Network Rail's Board that it considered that around £300m of targeted activity would be required in CP6 to resolve failures as they arise. It planned to draw on the contingency in Network Rail's 'group portfolio fund' for this (discussed further in chapter 8).

6.19 On this, we recognise the need to have contingency available for extreme weather events (such as that at Dawlish in 2014), but consider it would be appropriate for funds to be directed more proactively at those renewals that Network Rail would have undertaken had it not had overall affordability constraints.

6.20 Network Rail's own assurance found that some routes (LNE&EM, LNW and Wales) would not be delivering the minimum benchmark earthworks renewal activities that its own modelling suggested were required. The planned volumes would be below the level considered necessary to maintain current levels of risk exposure.

6.21 We consider that alternative mitigations to renewals in this case, such as heavy maintenance or additional inspection activity, are not demonstrably effective in controlling risk in every case – especially the risk arising from sudden failure of assets during extreme weather. For this reason, in our draft determination we asked Network Rail, in its re-plan for asset sustainability, to prioritise geotechnical assets whose renewal had been deferred and where the consequences of failure would be most serious.

Level crossings

6.22 Network Rail is revising its strategy on level crossings to reflect that there is currently no additional specific funding for reducing safety risk for CP6. STE is also drawing up guidance for routes about factors influencing gross disproportion when considering investment options at level crossings.

6.23 We highlighted in our draft determination that Network Rail should show why level crossing spend listed as 'optional' in its plan was not reasonably practicable. From our assessment, we consider that this should be in the 'core' plan and, as such, that a further £25m should be spent in LNW and £8m in Wales.

6.24 Further, we were concerned that Network Rail's revised level crossing strategy had removed some of the stretching targets for routes to achieve improvements at passive crossings and those with the least reliable methods of warning those using the crossing. STE has been overseeing the development of value for money solutions at crossings that currently have the least reliable controls. We suggested in our draft determination that this has made some technical improvements reasonably

practicable, and that there should be a targeted application of them. That is why we considered that £25m to upgrade the highest priority user-worked crossings with overlay warning systems[44], instead of relying on telephones, was a reasonably practicable measure and should be funded from the outset. Network Rail accepted this in its response to our draft determination.

FNPO Workforce Safety

6.25 During our assessment, we challenged Network Rail on issues relating to basic health & safety legal compliance. In its plan, the FNPO assigned work relating to its FNPO Safety Improvement Programme as 'optional' spend. We set out in our draft determination that this should be moved into the 'core' spend at a cost of £22m. Network Rail agreed.

Our determination

6.26 It is not ORR's role to dictate or prescribe what is reasonably practicable or tell Network Rail how it should meet its legal obligations. It is, though, our role to judge whether the CP6 SBP can deliver a safe, legally compliant railway. In doing this, we have challenged Network Rail where it appears to be ruling out safety-related expenditure that might be reasonably practicable.

6.27 We had a positive response from Network Rail to these challenges in our draft determination. This resulted in committed additional spend totalling some £80m:

- movement of the FNPO's 'optional' spend of £22m for basic depot safety improvements into 'core' spend;

- for LNW and Wales routes, the 'optional' level crossing spend of £25m and £8m has become 'core' spend; and

- allocation of £25m for priority user-worked crossings with telephones in long sections to become upgraded to overlay warning systems.

6.28 Network Rail's response to our draft determination also offered additional items to those we had identified, such as £10m more on level crossing safety improvements on Western route, while the updated plans in Scotland allocated additional funds to address safety and asset sustainability concerns at bridges in Scotland containing alumina cement.

6.29 All of these decisions are welcome. They do not, however, resolve the issue of reasonable practicability once and for all. We will continue to explore this with

---

[44] These systems provide a means of warning crossing users of approaching trains. They are in addition to the existing signalling system, rather than being integrated into it.

Network Rail in CP6 as Network Rail continues to refine its own thinking and the guidance it offers to routes.

6.30 We discuss in chapter 7 that in our draft determination we set out that around an extra £1bn of expenditure should be put into improving asset sustainability. We asked Network Rail to adjust its plans to include additional renewals to reflect this. In the context of mitigating safety risks, we stated that we expected it to consider earthworks, drainage and structures (in particular, metallic structures) prominently as part of this process, given that these are assets where alternative mitigations are least effective in preventing failure.

6.31 Network Rail responded by presenting additional evidence, notably including improvements to its modelling of asset sustainability. Reflecting this updated modelling, it proposed to increase renewals spend in CP6, but not by as much as set out in our draft determination. However, the revised modelling indicated that it delivered comparable levels of asset sustainability over future control periods. Furthermore, the additional renewals work that Network Rail had committed to is targeted at priority risk-control areas. We are satisfied that this work has contributed to a business plan that has the potential to deliver a railway that is safe and legally compliant.

6.32 In addition, Network Rail has identified other initiatives in its proposed R&D programme that will be targeted at reducing the need for future full-scale, traditional renewals by exploiting innovative techniques.

6.33 Network Rail's own assurance activities have been robust, resulting in progressive challenge to route proposals and securing improved arrangements. This is a positive development. The routes show varying degrees of ambition and maturity, but the matrix framework has the potential to drive the required improvements. In particular, there needs to be an evolution in routes' understanding of what 'so far as is reasonably practicable' means for their investment decision-making.

6.34 Regarding safe asset management, Network Rail should work towards improvement across all asset classes to assure continued safety over the network and greater sustainability over time. Our final determination reflects the targeted adjustments we asked Network Rail to make to its plans, partly to ensure that minimum safety requirements are met.

6.35 Network Rail's revisions to its plans are still being developed and some expenditure is contingent on realisation of efficiencies. However, we expect Network Rail to continue to consider the impact of additional spend on health & safety improvements, should the balance of funds available to the company change.

6.36 We see potential for the routes to improve their risk-based prioritisations and to identify further SFAIRP[45] improvements, but these are matters for continued scrutiny as part of our normal safety regulation. We will focus our regulatory efforts on holding Network Rail to account, at routes and at its centre, for the effective delivery of the totality of its plans to achieve optimal risk control.

---

[45] So Far As Is Reasonably Practicable.

7. Cost and income assessment

Overview

This chapter sets out our assessment of Network Rail's forecast costs and income in CP6.

It is structured in five main sections, considering: geographic route costs and the overall level of efficiency challenge in the plans; the costs in the FNPO plan; the costs in the SO plan; R&D costs; and the scrutiny of Network Rail's other single till income forecasts.

Our findings are supported by a number of assumptions and detailed requirements which are set out in our supplementary document on our review of Network Rail's proposed costs.

Context

7.1 Network Rail has performed poorly over recent years in terms of delivering efficiently against its plans or our PR13 final determination. In important areas, it is now substantially less efficient than at the end of CP4.

7.2 Measuring the company's GB-wide performance for the work delivered in the first three years of CP5 against our PR13 final determination, Network Rail underperformed by approximately £2.7bn on renewals and £0.3bn on maintenance (both in 2016-17 prices). For Scotland, it underperformed by around £153m on renewals and £5m on maintenance (likewise, in 2016-17 prices).[46]

7.3 In 2017, we spent some time focusing on the underlying causes of this deterioration in renewals efficiency. In our view there was evidence that the following have been material factors in driving recent trends in efficiency: Network Rail was poorly prepared to deliver renewals at the start of CP5; its PR13 efficiency improvement plans were not well founded; it reacted slowly to the problems on efficiency; and there was increased pressure on access to the railway to carry out work.

7.4 In addition, the reclassification of Network Rail as a public sector body, with the introduction of fixed borrowing limits, meant that when problems arose this prompted repeated re-planning of work to stay within the new funding constraints. We also highlighted that devolution to routes had initially led to unaffordable increases in the scope of work in some areas, as route teams delivered additional work for their customers, which had the effect of compounding affordability constraints elsewhere.

---

[46] These figures are based on FPM. This measure reports how well Network Rail is performing once we take account of whether the company has delivered the work that it planned to undertake. This ensures that a deferral of renewal work is not recorded as an 'efficiency'.

7.5 Given continued stability in the structure and funding of the industry, these factors are likely to be absent in CP6, while stable bottom-up planning has the potential to make better use of access to the railway for engineering work. In particular, the funding certainty provided by control periods provides a basis from which Network Rail should be able to deliver efficiently.

Efficiency of geographic route plans

7.6 When reviewing whether Network Rail's plans have identified an appropriate level of efficiency improvement, we have focused on whether the level of challenge is a reasonable one to set the company's management, given where Network Rail is in terms of its ongoing transformation.

7.7 Network Rail's general approach has been to base many of its forecasts on the cost levels it has incurred in recent years (and, in particular, costs from 2015-16). The timing of this review therefore means that the historical evidence on cost is taken from a period of particularly poor efficiency.

7.8 This makes it particularly important to understand these cost levels and to reverse out historical inefficiencies that have been, or that we expect to be, addressed by the end of CP5. We have prioritised our work with this in mind, and have focused on two particular areas:

■ **evidence on current unit costs**: in many places, the company has used data from 2015-16 to inform the costing of its business plan. We have reviewed the process by which Network Rail has determined the appropriate adjustments to these numbers to identify a baseline level of costs, which are then used to understand the likely cost of delivering its plans in CP6; and

■ **evidence on cost pressures and opportunities**: we have reviewed how, within the company's current operations, the unit costs are likely to change over time, in response to future cost pressures and opportunities for cost savings.

7.9 Our supplementary document on Network Rail's proposed costs focuses on these two aspects of efficiency. It looks at the evidence available about the current level of costs and where there is evidence to reach a view on how they might change over time.

7.10 There are, however, other areas where our review has been limited by the inevitable difficulty in quantifying efficiency adjustments and by time constraints on our work. In particular, we consider that the significant changes made to the company – and which continue to be made – have the potential to unlock significant further efficiency savings. These further changes – when combined with the likelihood that the changes that have already taken place will continue to drive efficiency improvements

over time – indicate the significant potential for further improvements to efficiency in CP6 and beyond.

7.11 At the time of our draft determination we therefore considered that Network Rail had not set itself sufficiently challenging targets to improve its net efficiency. This led us to set a significant further 'efficiency challenge'. The company, whilst not accepting all of our arguments, has responded positively to this challenge and this response has informed our final determination.

Our efficiency review: approach and scope

7.12 Network Rail's cost base for operations, maintenance, renewals and support activities in CP6 is in the order of £30bn. Assessing the basis for and efficiency of these costs has been a significant undertaking. Our work built on our monitoring of Network Rail across CP5 and involved a programme of preliminary meetings and specialist investigations over the course of 2017. This work ensured that we were prepared for an intensive review of the contents of the SBP when they it was submitted in February 2018.

7.13 After receipt of the SBP we conducted an in-depth analysis of it and the supporting documents. This was undertaken in our offices and through a series of visits to Network Rail locations across GB. The work of our in-house specialists was supplemented by a series of focused studies carried out by independent reporters and other consultants. We consider that this process has allowed us to draw appropriate conclusions about Network Rail's proposals.

7.14 Reflecting the size of Network Rail and its devolved structure, our review was risk-based. We developed a methodology for this and took a sampling approach, to focus our resources on areas where there was a significant perceived risk that costs were not reasonable and where the magnitude of any errors would have a significant impact on the overall settlements. This approach also put appropriate weight on Network Rail's own internal assurance reviews.

7.15 As stated above, earlier in PR18, we undertook a number of studies and other activities in preparation for submission of the SBP, with a particular focus on reviewing the processes that support the production of the business plans. In particular, our scrutiny has been informed by the review of Network Rail's business planning process by Nichols, the independent reporter, in summer / autumn 2017, which is available here.

7.16 However, our detailed review of the business plans themselves took place between December 2017 (when Network Rail submitted a draft of its SBP submission) and the end of March 2018. Indeed, the bulk of this work was undertaken after Network Rail submitted its final SBP in early February 2018. The nature and extent of our scrutiny prior to the draft determination was therefore constrained by the time available, which

reflected earlier delays affecting the PR18 timetable; notably the later than envisaged SoFAs and the later publication of Network Rail's SBP.

7.17 Our work in this period was assisted by specialist consultancy support which considered matters such as cost planning, headwinds & efficiencies and risk.

7.18 We also undertook econometric benchmarking to support our understanding of costs and to identify where there might be evidence of particular issues. The direct use of this work for PR18 is limited by constraints on data quantity and quality. But it supports the view that there are inefficiencies within Network Rail's business processes which are not fully addressed by the efficiency plans set out in the SBP. This view was reinforced by an additional piece of analysis which we commissioned from an independent consultant after the draft determination[47]. Overall, this evidence provides confidence that efficiencies beyond the level initially proposed by Network Rail in its SBP should be deliverable.

7.19 We have set out more detail about the process which we followed and our conclusions in our supplementary document.

Our efficiency review: findings

7.20 Our review of Network Rail's costs has been structured around the key costs included in Network Rail's SBP submission, which are discussed in turn below.

Maintenance and renewals costs

Asset management planning

This considers the processes by which Network Rail identifies what work and how much is needed on its assets (to establish its 'workbanks').

7.21 Overall, we consider that Network Rail has followed a reasonable approach to understanding its asset base and to allocating the resources available in a way which reflects the strategic objectives of each route, while at the same time giving reasonable weight to safety, performance and compliance with its own asset policies. That said, we think that further improvements in resource allocation can be made and we require Network Rail to develop, in consultation with routes and external stakeholders, a better methodology for any subsequent allocation of funds between routes both within and beyond CP6.

7.22 The reliability of infrastructure resulting from the levels of work proposed in the SBP is broadly in line with expectations. However, Network Rail's plans are expected to lead to an overall deterioration in the condition of assets. This does not mean that

---

[47] 'Evidence on top down and bottom-up efficiency adjustments for Network Rail's CP6 maintenance and renewals', CEPA, October 2018, available here.

safety is compromised, as Network Rail has processes in place to control safety risks.

7.23 Network Rail used a high-level aggregate measure of asset sustainability (CSI) to predict the levels that would be achieved with the activity proposed. Analysis of the SBP for the draft determination concluded that asset condition as measured by CSI would deteriorate by approximately two per cent over CP6 compared with the predicted condition at the end of CP5. This predicted deterioration was not uniform across assets or routes. In particular, expenditure on track, structures (in particular metallic structures), earthworks and drainage were specifically identified as areas of concern. The Scotland route plan delivered forecast asset condition that looked to be broadly acceptable, as the relatively moderate deterioration forecast in CP6 followed the improvement in condition over CP5.

7.24 Based on this analysis, we estimated that approximately 11% of additional work activity (by volume) would need to be added to renewals plans to fully address the forecast fall in CSI across GB.

7.25 Our advice to governments highlighted the importance of asset sustainability. This advice was accepted by both governments, and was one factor behind the significant increase in funding made available to Network Rail. As this funding envelope is now effectively fixed, our draft determination challenged Network Rail to address this concern by reprioritising and replanning its activities for CP6 to ensure that asset sustainability remained within acceptable bounds. In particular, we suggested that additional renewals could be funded by reducing R&D funding and through the efficiency savings identified by other aspects of our review.

7.26 Network Rail accepted our challenge and its response to the draft determination included proposals to spend an additional £608m (£538m in England & Wales and £70m in Scotland).

7.27 The proposal is supported by technical arguments and updated modelling of future asset sustainability. This made the case that the deterioration in asset sustainability that we anticipated in the draft determination will be mitigated by factors such as: improved asset knowledge and monitoring; refinements to asset management policies arising from R&D and other improved technology; future efficiency improvements; and other continuous improvements in asset management and engineering.

7.28 Network Rail also suggested that asset sustainability forecasts would be improved if it took account of anticipated enhancement projects and probable expenditure from risk funding on assets that have been damaged (e.g. earthworks after a flood).

7.29 We have reviewed Network Rail's proposal and are persuaded by these arguments. In short, this analysis indicates that a similar level of asset sustainability can be

achieved with a smaller increase in renewals spend compared to our draft determination. In particular, while the updated proposal is forecast to deliver slightly lower CSI in CP6, it delivers a positive basis for better long-term outcomes. This is summarised in Figure 7.1 below.

Figure 7.1: Long-term forecasts for asset sustainability, as measured by CSI
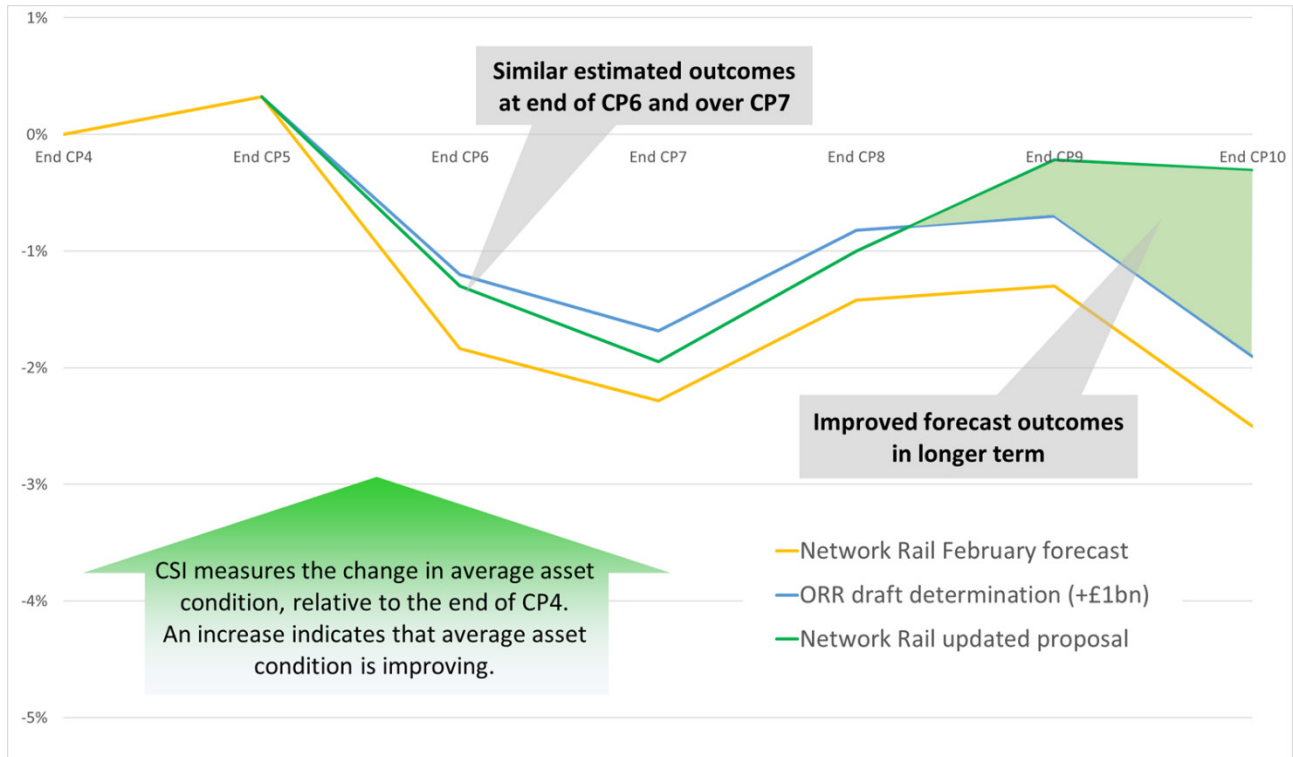
7.30 We are therefore basing our final determination on Network Rail's proposal to increase renewals by £608m[48]. Details of the allocation of this funding across routes, together with important assumptions and associated requirements, are set out in our [supplementary document](#) on our review of Network Rail's proposed costs.

7.31 The increased level of renewals is still expected to lead to a fall in asset sustainability as measured by CSI over CP6. We therefore require Network Rail to seek further opportunities to improve this position and this should include planning additional renewals which could be supported by contingent asset management funding (described in chapter 8) to be progressed to best effect without delay.

Cost planning and estimation

This reviews forecasts of the cost of delivering the workbanks. Different estimating methods were used for maintenance and renewals work.

7.32 The cost of maintenance work was estimated using Network Rail's Activity Based Planning (ABP) tool. The use of ABP is a positive step forward and is a valid basis for estimation of these costs. However, we note that Network Rail's own assurance of

---

[48] £20m of this is Schedule 4 costs that are included in Schedule 4 in the tables in chapter 8.

the ABP-based estimates raises concerns about deliverability and strategic alignment of the plans, which means that there may be some risk to the efficient delivery of planned maintenance work volumes within the estimated cost of this activity.

7.33 The cost of renewals was estimated by the routes with support from the Infrastructure Projects (IP) division and, in general terms, the methodology used high-level unit rates to price the workbanks. As noted above, we focused on whether these renewals costs: were derived from base rates that exclude historical inefficiencies and other one-off events associated with CP5; did not include inappropriate contingency; and indicated any general, systematic weaknesses in how routes have costed their work.

7.34 To investigate these areas of interest we appointed an independent cost consultant, Gleeds. Gleeds examined a representative sample of routes and considered the estimating approach which Network Rail has taken for a selection of work types. Its report concluded that there was not widespread inaccuracy or sufficient evidence to support adjustment of the overall renewals budgets, but identified a number of issues relating to renewals efficiency, notably:

■ inconsistencies in the way that individual routes have applied the guidance and national rates provided by the IP cost planning team; and

■ individual instances of risk and inefficiency being inappropriately included in estimating rates.

7.35 Gleeds' report highlighted a number of shortcomings in various aspects of Network Rail's approach, but then concluded in respect of each of these that there was insufficient evidence to adjust the renewals forecasts. Importantly, while there may be a lack of evidence to quantify individual adjustments, we consider that the report provides evidence in support of the view that there remain significant further opportunities for Network Rail to deliver work below the cost included in its business plans.

7.36 Furthermore, Gleeds reviewed whether Network Rail had applied its process to the development of the assumptions included in the strategic plans, and whether routes had justified the instances where they departed from the national unit rates. The process that Network Rail followed does not provide sufficient assurance that the original unit rates removed all of the CP5 inefficiencies. These have not, for example, been benchmarked against external comparators. The routes had the ability to adopt different rates and we do not consider that this provides full assurance over the level of costs included in the business plans, as all parties have similar incentives in respect of not setting unduly stretching cost targets. During CP6 we expect comparison between routes on efficient delivery to provide sharper incentives to

improve, and provide better information for future business planning. We will review progress in this area during CP6.

7.37 Reflecting this, we consider that this analysis forms part of the overall case for increasing the efficiency challenge on Network Rail, relative to the February 2018 SBP proposals.

Delivery planning

This covers the processes that control how projects are delivered, and which support efficient expenditure in practice.

7.38 A further element of overall efficiency is whether Network Rail is well-placed to deliver its work efficiently in practice. There are a number of aspects of this:

- whether there are good quality plans in place that describe with sufficient clarity the work that Network Rail expects to undertake to deliver the outcomes included in its business plans;

- whether the level and profile of expenditure across the five years of CP6 are deliverable with the available resources, access and supply chain capacity (often referred to as the 'deliverability' of the plans) and provide an efficient transition into CP7; and

- whether Network Rail has in place effective processes to deliver planned work efficiently.

Quality of plans

7.39 The general quality of the business plans is a significant improvement on those prepared ahead of CP5. As noted above, we have reviewed the asset management and cost planning processes and a significant shift in this respect is the move to bottom-up planning. These improvements sit alongside the new process that Network Rail has followed to prepare its plans, not least the increased involvement of stakeholders and the ongoing comparison by Network Rail's Business Review Team of the relative quality of the business plans. This has provided a further stimulus to improve the quality of business plans across the routes.

Deliverability of planned activity levels

7.40 Turning to the overall deliverability of these plans, Network Rail has reviewed the levels of activity implied by aggregating the route business plans. This led to the company making a number of adjustments to the initial plans to address concerns about whether the level and profile of work was capable of being delivered in an orderly and efficient way (and, for example, did not imply significant peaks and troughs in certain types of activity).

7.41 In summer 2017, we commissioned Nichols to review Network Rail's approach to assessing the deliverability of its plans[49]. This study found that Network Rail had clear processes in place to compile its plans and to assess whether they were deliverable. However, it also found that these processes were evolving and unproven. In light of these findings, we undertook additional work to review Network Rail's deliverability assessment.

7.42 The deliverability of Network Rail's maintenance and renewals activities needs to be assessed in conjunction with both enhancements to Network Rail's infrastructure and other national programmes including High Speed 2 (HS2), which potentially compete for many of the same resources. We have considered maintenance and renewals in the context of possible national programmes and, in general terms, we consider that the overall volume of work should be within the capability of the wider rail industry to deliver.

7.43 There are inevitable limitations in the analysis we undertook. In particular, while we reviewed historical evidence on volumes and compared this to forecast activity levels, it was not practical to assess the likely future capability of each company in the supply chain.

7.44 There are risks associated with deliverability. In particular, the overall level of supply chain activity will be affected by future decisions by governments on enhancements, and there may be implications from Brexit. Given that enhancements compete not just for supply chain resources but also for Network Rail's own internal resources and access to the network, we consider it important that the approval process for enhancements takes account of underlying delivery plans for maintenance and renewals and ensures that the cost and other effects of any disruption to these is taken into account.

7.45 Network Rail has constructed detailed, bottom-up delivery plans for its maintenance and renewals activities. These have been subject to a two-level assurance process: for level 1, routes undertook a self-assessment of deliverability, using the framework proposed by Nichols in its 2017 report; while level 2 involved central assurance of the plans by Network Rail.

7.46 This general approach looks to be appropriate – and is an improvement on the planning for CP5 – but Network Rail's assurance over CP6 is primarily a review of volume and expenditure profiles against previously achieved levels. If the supply chain's overall capability remains in line with previous levels, this indicates that the workload should be deliverable.

---

[49] 'ORR PR18 delivery planning review', Nichols, July 2017, available here.

7.47 Network Rail has also considered the deliverability of the additional works proposed to address our concerns about asset sustainability. The company's own assurance was limited due to the time allowed to respond to the draft determination but the scale of these works relative to the base programme, coupled with a relatively long lead-in (the works are generally planned for years 3 to 5 of CP6)[50], gives grounds for confidence that they can be delivered.

7.48 However, Network Rail has more to do to provide robust assurance for its whole programme. In particular:

■ on signalling works, there remains a significant peak in activity in the third year of the control period, which then falls towards the end of the five-year period. Longer-term forecasts of signalling activity then suggest a step-up in activity. This raises questions about whether this profile fully supports efficient delivery over time;

■ more generally, overall activity levels peak in years 3 and 4 of the control period. We are not yet comfortable that Network Rail has sufficient assurance that this level of activity is deliverable, or that it would be the most efficient profile of work. In particular, there is little evidence that Network Rail has confirmed that the supply chain can deliver the planned work profile or that doing so would be an efficient use of available resources. This is relevant to the later discussion on overall efficiency; and

■ there are some issues with the quality of plans for maintenance, where the output of Network Rail's delivery assurance shows scores for confidence in delivery ranging from 19% to 72%, with an average of 54%.

7.49 We expect these matters to be addressed during Network Rail's development of its delivery plan for CP6.

7.50 Network Rail's further assurance work should also consider whether there are opportunities to smooth the profile of expenditure in individual asset categories, including the likely transition between CP6 and CP7. In general terms, a smoother profile of activity should support cost reduction in the supply chain and improve Network Rail's own efficiency levels. The timing of the additional work to improve asset sustainability should help with this concern but we think that more needs to be done.

7.51 In addition, with Network Rail classified as a public sector body, it is important for the governments that there will be appropriate governance of Network Rail's budgets in the new control period. Public sector bodies generally have limits on what money

---

[50] This generally corresponds to the period where the total volume of work is reducing (following the forecast peak in year 3 of CP6), which could act to smooth the total profile of work over time.

they can transfer between years, and are (currently at least) not permitted to transfer capital expenditure to operating expenditure. This reflects the need for governments to manage their overall budgets. The rules on budgetary flexibility that will apply to Network Rail in CP6 are discussed in chapter 8.

7.52 As a result of these rules, Network Rail will have to exercise greater control over its expenditure profile than in the past. The limited assurance of current plans is a risk to this, and Network Rail should ensure that it develops a detailed delivery plan that will support the expenditure profiles agreed with its funders based on our final determination.

The process of delivering planned work

7.53 We found that delivery planning for renewals follows a reasonably well-defined process which considers matters such as access, critical resources and supply chain capacity.

7.54 As we have previously noted, Network Rail's plans included a peak in signalling volumes in years 3 and 4 of CP6. There is a similar peak in the last year of CP5, which Network Rail is on course to deliver. This comparison has given assurance that a critical scarce resource (signalling testers) required for commissioning would be available in CP6 if resources are maintained at current levels.

7.55 We also found that routes had considered deliverability at several points in preparing their workbanks. Individual routes concentrated on different factors based on local priorities and stakeholder engagement. For example, Anglia focused on gaining high-level agreement with operators for engineering access. All routes have commenced mobilisation for CP6 and are reporting against leading indicators of their readiness.

7.56 However, the current delivery planning processes generally have a limited time horizon, and currently only look with certainty two years ahead for access and resource planning. Acknowledging that there are limits in practice to how far in advance this planning can extend, this means that the process does not extend beyond the early years of CP6 for two critical components. We require that planning has a time-horizon that extends over the full five-year control period, albeit that later years would have a greater degree of uncertainty attached to them. We expect this planning to also take account of emerging plans for enhancement works.

7.57 This means that there is limited assurance that the activity levels included in the plans can be delivered, and uncertainty over the implications for the levels of possessions needed to deliver the work. The pressure on access is likely to increase as traffic levels continue to grow and train operators seek to maximise income from discretionary travel. Network Rail has identified this as a key risk to delivery of its plans.

7.58 We highlighted the importance of access as a key determinant of the overall cost of Network Rail's renewals efficiency. However, due to the limited time horizon over which delivery planning takes place, we do not have assurance that Network Rail has in place access plans that appropriately support improvements in renewals efficiency. Reflecting this, we require Network Rail to undertake additional assurance that the proposed work volumes for CP6 can be accommodated within existing Operational Access Rules and that the feasibility of the broad level of access required has been confirmed by discussions with train operators and other stakeholders.

Support costs

This covers a wide range of activities that are needed to allow core operations, maintenance and renewals activity to take place (such as human resources, information technology, etc.).

7.59 Support costs are incurred both at route-level and at the centre. Our review of support costs was based on a sample of the main support functions and involved a series of deep-dive meetings and desktop reviews of the business plans. Our sampling focused on support costs incurred at the centre, which account for 88% of the forecast support costs. We also reviewed how Network Rail had secured its own assurance over these costs. In this respect, Network Rail had commissioned a series of external consultancy reports and, after assessing them, we concluded that they provided us with reasonable assurance on these costs.

7.60 However, we identified a number of areas where Network Rail had included costs which we considered to be inefficient. We have concluded that this analysis supports the overall case for increasing the efficiency challenge on Network Rail (see below).

Operations costs

This covers the cost of the day-to-day operation of the network, including the costs of signalling operations and reactive management to restore service after incidents and other perturbation.

7.61 These costs are mainly determined by how train control, and other aspects of operations, are delivered. Within the current operating model, staff costs are largely determined by the company's decisions on pay. Further, where staffing levels are more discretionary (e.g. for performance support staff), there is often a significant trade-off between the cost of such staff and their benefits to operational performance, particularly train punctuality and reliability. In general, opportunities to change staffing levels only arise when technology or other similar changes to the operational environment are introduced.

7.62 To validate these findings, our review considered: the different roles undertaken within routes' operations teams; the factors which influenced staffing levels; and the impact of these roles on Network Rail and its customers. We have assessed how

these factors apply in a sample of routes and confirmed these findings through two more detailed case studies.

7.63 Our overall determination is that Network Rail's planned staffing levels and associated costs for CP6 are appropriate.

Digital rail costs

This covers certain costs relating to the major programme of enhancements that is intended to upgrade capacity and performance of the network by introducing new train control technology and other related innovations.

7.64 Consistent with other enhancement programmes, the majority of the Digital Railway programme and associated deployment costs falls outside of the scope of PR18. However, the SBP included two areas of expenditure associated with the Digital Railway programme. These relate to:

■   Route Services Directorate (£119m): Fitment of European Train Control System (ETCS) to 36 on-track machines, IT, training and support costs associated with the Digital Railway schemes planned for CP6; and

■   Group Digital Railway (£180m): Industry programme costs, system authority activities, national enabling and support programmes.

7.65 DfT has confirmed that it supports the England & Wales share of the GB digital rail spend being included in Network Rail's costs, whereas Transport Scotland has consistently challenged whether a proportion of these costs should be allocated to Scotland.

7.66 These costs cover a programme team and fitment costs for Network Rail's own machines. Network Rail has said that operationally it needs the full programme team; it cannot scale this down to just England & Wales. Network Rail's plans do not include deployment in Scotland in CP6, although Scotland services and passengers may still benefit.

7.67 This raises a question of whether Transport Scotland should pay for these costs if it has not specified that it wants digital rail to be deployed in Scotland in CP6. Based on the SBP, Transport Scotland's share of the GB costs would be £22m (this relates to programme team costs only, not fitment).

7.68 We know that the Scottish Ministers support innovation and electronic signalling solutions. In its Rail Infrastructure Strategy consultation 2016, Transport Scotland set out that the Scottish Government is keen to support industry innovation to improve the efficiency, resilience and quality of passenger-facing services. It has committed to working with industry partners across Great Britain to support the development of proposals for a modernised railway, including the introduction of new electronic signalling solutions.

7.69 In its response to the draft determination, Transport Scotland indicated that it may be willing to contribute towards the Digital Railway programme subject to there being a digital rail strategy in place for Scotland. The Scotland route's signalling strategy for CP6 falls short of Transport Scotland's expectations, particularly the sections dedicated to Network Rail's longer term proposals and the roll out of ETCS in Scotland. This needs to improve. Transport Scotland will require a greater level of detail to provide it with assurance that Network Rail's proposals align with the priorities of the Scottish Ministers.

7.70 Transport Scotland is also of the view that the work of the Digital Railway programme Board does not consider the position in Scotland in enough granular detail as, it argues, there is currently a greater focus on DfT's priorities. Again, this needs to change. Throughout CP6, Network Rail must provide a greater level of assurance to Transport Scotland that the priorities of the Scottish Ministers are fully reflected in the digital signalling plans.

7.71 Network Rail must continue to ensure that it has appropriate governance arrangements for the digital railway expenditure so that all funders are involved.

7.72 We consider that the development of the Digital Railway programme will deliver future benefits for passengers in Scotland, which align with Scottish Government key strategic outcomes, in particular for improved services (digital rail technology will deliver faster journey times) and improved capacity.

7.73 More generally, the GB rail network is an integrated system and it remains the case that all funders benefit from the complete system. There is a balance between meeting an individual funder's requirements and avoiding what could be seen by other funders as an adverse effect on the integrity of the railway system as a whole. This is a particular risk if funders change their priorities in the future.

7.74 Our view is that part of the cost of the GB-wide Digital Railway programme team should be allocated to Scotland, to support the long-term integrity of the rail network and reflecting that there is a reasonable prospect that benefits will be enjoyed by passengers and freight in Scotland.

7.75 We understand that Network Rail is in the process of developing a GB-wide plan for digital train control from CP6 onwards. This will be a renewals based long-term plan that links together infrastructure and train investments. Given the Scottish Government's investment in the Digital Railway programme (£22m) and Transport Scotland's view that the Scotland route's signalling strategy is not fit for purpose, for CP6, we are requiring Network Rail to develop a separate Scotland plan (in addition to but feeding into the overall GB-wide plan). Transport Scotland must be involved in the development of the Scottish plan.

7.76 Following publication of the final determination we will work with Network Rail and Transport Scotland to ensure there are appropriate governance arrangements for the Digital Railway programme spend in CP6.

7.77 In respect of the forecast costs, we reviewed the evidence submitted to support these items, established greater clarity about what the expenditure relates to and have determined that they are justified to be included in the determination.

7.78 Consistent with the lessons learnt from CP5, for expenditure funded through the periodic review, we will need to establish: clear ring-fencing of this expenditure; clarity around the roles of governments and ORR in respect of approving expenditure; and who is responsible for identifying an up-front estimate of the efficient costs of this work. In addition, ORR will routinely report on the efficiency of this expenditure, relative to the forecasts made when projects were approved.

Route efficiency plans

These are the routes' proposals to deliver efficiencies, which include external cost pressures identified by Network Rail (called headwinds[51]) that act to increase the cost of work ahead of and within CP6, relative to historical cost levels.

7.79 Together with Network Rail, we commissioned Nichols to examine Network Rail's approach to estimating headwinds and efficiencies in the SBP and to confirm that these are reasonable[52].

7.80 In general terms, Nichols found clear evidence of well-structured efficiency plans that are owned by the route management teams.

7.81 However, the reporter also concluded that the headwinds included by Network Rail may have been over-estimated through the inclusion of matters which could be either covered by risk funding or in other elements of the SBP. The reporter provided a classification of the areas of potential concern and we used these to assess the potential financial impact of these matters for the draft determination.

7.82 In addition, the reporter raised questions over the way in which efficiency targets had been set by routes and indicated that these may have been reduced, possibly to reflect experience in CP5. We therefore expressed concern in the draft determination that the efficiency targets that the routes set themselves may not be sufficiently challenging in all areas.

---

[51] As defined by Network Rail, headwinds are external cost pressures and efficiencies that are initiatives by Network Rail to improve the efficiency of its work delivery.

[52] 'PR18 review of Network Rail efficiencies', Nichols, April 2018, available here.

Our efficiency review: overall view on forecast efficiency

7.83 Overall, we consider that the route-based strategic plans are a significant improvement on the SBP submitted in CP5. They benefit from improved asset management, cost planning and delivery planning processes, and are based on bottom-up analysis of the work that individual route teams consider should take place over CP6.

7.84 These plans also identified a range of efficiency savings, including route-led initiatives. We have reviewed these efficiency plans to identify whether there is reasonable evidence that the plans are credible.

7.85 However as discussed above, there is a range of evidence that supports the view that further efficiency savings should be identified. In this context, our analysis of the SBP for the draft determination identified that:

■ there may have been areas where Network Rail did not consistently apply its own guidance in establishing CP6 core pricing for pre-efficient renewals costs. We were concerned that estimating processes did not provide full transparency over the removal of inappropriate inefficiencies which arose in CP5 from the rates used to establish the CP6 base price;

■ there were a range of examples where efficiency had not been fully factored into individual plans (but where there was not widespread or sufficient evidence to support adjustment across Network Rail's plans);

■ our review of support costs identified a number of areas where inefficient costs had been included in the SBP. We concluded that this analysis supports the overall case for increasing the overall efficiency challenge on Network Rail; and

■ the headwinds had been over-estimated, and some lacked clear justification.

7.86 This analysis led us to set a significant further 'efficiency challenge' to Network Rail in our draft determination. The company, whilst not accepting all of our arguments, has responded positively to our challenge.

7.87 Network Rail's response proposed additional net efficiencies of £671m, however we identified that £7.8m of this was misclassified, resulting in a corrected total of £663m. Of this total, £573m affects England & Wales, while £90m affects Scotland, relative to the February 2018 SBP.

7.88 Of this total, £180m is a re-allocation from headwinds to base costs and the £7.8m misclassification was removed from both efficiencies and base costs (and so has no impact on funding). The overall impact on funding is to increase the amount available compared to its February 2018 SBP by £491m (£428m for England & Wales, £63m for Scotland).

7.89 After reviewing Network Rail's response and making the correction referred to above, we have decided to accept the proposal in our final determination on the basis that:

- it represents a major improvement on the SBP and provides additional funding for asset sustainability, R&D and safety related activities in CP6;

- Network Rail has made significant efforts to address our concerns and the scale of its response (£663m) is comparable to our challenge (£659m); and

- we are satisfied that the routes were involved in planning and quantifying Network Rail's revised efficiency proposal and that each has taken ownership of its efficiency target for CP6.

7.90 The allocation of the additional efficiencies by route is shown in Table 7.2 in our supplementary document on our review of Network Rail's proposed costs.

7.91 Although Network Rail's proposal meets our challenge on efficiency, it does not release the level of net funding that we anticipated in the draft determination as some costs are now included in the base. However, having a significant efficiency challenge which the routes have taken ownership of supports greater levels of route accountability. Therefore, we have accepted Network Rail's proposal.

7.92 In the context of Network Rail's current efficiency levels at the end of CP5, achieving the target efficiencies at the start of CP6 and continued improvement during the control period will be challenging, but we recognise that the company has the potential to meet this challenge and to realise further gains.

7.93 Finally, our examination of Network Rail's proposals, taken with our experience of its performance in CP5 and the work of our consultants, suggests that the company has the potential to make further improvements to its efficiency through and beyond CP6. We therefore require Network Rail to develop a pipeline of further efficiencies, with a view to continuous improvement on efficiency throughout CP6 and into future control periods.

The FNPO

7.94 The FNPO revenue requirement includes a relatively small funding for its own support and operating costs of £28m for all of CP6. It includes a small staffing cost reduction. On the basis of our review of the plan and given the scale of the FNPO's proposed expenditure, this is reasonable.

7.95 However, the plan included an optional and unfunded £22m initiative to make certain safety improvements at depot facilities. We consider these improvements are necessary to achieve basic compliance with health & safety legislation. For this reason, we will include a further £22m in the FNPO settlement.

The SO

7.96 The SO's strategic plan included a substantial uplift in its forecast expenditure relative to CP5, from around £145m[53] to around £270m, comprising around £210m of operational expenditure and around £60m of capital investment. We reviewed these cost increases, and consider that they are reasonable in light of our expectation that the SO will be delivering a significant increase in its capability.

7.97 This additional operational expenditure should enable the SO to improve the quality of its analysis and advice, to reduce the number of errors in the timetable and to implement a more responsive approach to strategic planning. In particular, an increase in staff numbers (of around 100 additional staff from the current total of around 700) should support improvements to the quality of timetables and the SO's ability to manage changes to these timetables.

7.98 The SO is proposing an ambitious capital investment programme in CP6 (£60m), most notably in capacity planning systems (£55m). These are intended to reduce the number of errors in the timetable, increasingly automate the timetabling process and improve the SO's modelling capability.

7.99 However, these programmes are at a very early stage of development, and Network Rail does not have a good record of delivering large-scale technology and change programmes in timetabling systems. As such, we are requiring the SO to implement certain improvements (identified by Nichols' independent review[54]) to its programme management processes, controls and capabilities to ensure it is well placed to deliver this capital investment. We will monitor the SO's progress in implementing these recommendations against its action plan (which we have reviewed) in advance of CP6.

7.100 In general, stakeholder responses were broadly supportive of our proposal to agree the SO's planned expenditure of £272m, acknowledging that the SO will need the proposed resources if it is to meet the expectations of its customers. Transport Scotland, however, was concerned at the scale of the increase in SO costs relative to CP5, in particular the costs of timetable planning.

7.101 Some stakeholders argued that, in light of the issues with the May 2018 timetable introduction, the SO should receive even more funding than it proposed in its strategic plan for further investment in the SO's timetabling systems.

7.102 The PR18 determination provides an individual settlement for the SO. However we recognise that circumstances can change and that it is important Network Rail and

---

[53] This figure includes £29m of capital expenditure, and £116m of operational expenditure.

[54] 'Review of Network Rail System Operator Control Period 6 processes and controls for investment decisions relating to capex spend', Nichols, June 2018, available here.

the SO are able to respond to events. Our [Managing Change Policy](#) sets out the process that Network Rail must follow if making changes to the SO budget (for example to provide additional funding to improve timetabling).

7.103 As such, and having reviewed the SO's plans and considered stakeholder comments, we are reaffirming our prior conclusion that the efficient direct cost of the SO should be £270m (comprising around £210m operational expenditure and £60m capital expenditure).

R&D

7.104 The February 2018 SBP included £440m for a central R&D fund. We discussed this proposal with Network Rail, and considered the evidence it presented to support what appeared to be a very substantial increase in R&D expenditure relative to CP5.

7.105 We strongly support the principle of R&D, and acknowledge the benefits that well-governed R&D spend can have in terms of supporting cost reduction, and improving asset management and passenger and freight performance. However, the evidence presented by Network Rail to justify the £440m fund was relatively weak, drawing on comparisons with other sectors that – in our view – were not reasonably analogous to rail for this purpose. After further discussion with Network Rail, we included a minimum of £100m in the draft determination with a requirement that the company should develop improved governance arrangements and seek additional matched funding from other sources. This represented a comparable level of spend through the periodic review against the then reported level of spend in CP5[55].

7.106 Network Rail responded to the draft determination with a detailed submission. This included correcting a significant error in its reporting of the actual level of R&D undertaken in CP5 (with the revised number being £238m), as it had failed to report the R&D undertaken in programmes across its business. This serves to highlight the concerns we set out about the governance of R&D spend by the company.

7.107 Notwithstanding this, Network Rail's updated proposals were a significant step-forward from those included in the February 2018 SBP, and:

■ set out a detailed, costed programme of projects for CP6;

■ sought funding from the SoFAs of £245m and made proposals to secure matched funding of £112m from other sources;

---

[55] Network Rail reported that it was forecast to spend £34m from within the periodic review/HLOS. Other amounts were provided from outside of the periodic review process, including: £23m spend by Network Rail; and an additional £105m provided by DfT to RSSB.

- set out a proposed governance framework which included representation from routes, funders and other stakeholders; and

- described the benefits of R&D including how it supports improved asset sustainability.

7.108 We have reviewed Network Rail's revised proposal. In light of this, and the balance of funding available across PR18, we are persuaded that an increased level of funding is justified by the potential benefits of a well-managed R&D programme, particularly those which support improved asset sustainability. We note that Network Rail is forecasting a benefit to cost ratio of 2.8 for its proposed programme. We will monitor performance against this forecast.

7.109 We determine that Network Rail's proposals for R&D are reasonable and supported by a good outline governance framework. We have provided funding of £245m for R&D related to operations, maintenance, renewals and support activities in CP6.

7.110 We require Network Rail to formalise its proposed governance arrangements, agree the detail with us and apply them to the R&D programme before the start of CP6 (and for all the PR18 funding to fall within these new governance arrangements). In connection with this, the proposed R&D Advisory Board should review and confirm the programme of activities before they commence.

7.111 Matched funding is a very important aspect of the programme. We require Network Rail to take urgent action to secure significant levels of third party funding and to tailor its R&D programme to reflect the availability of this money. We will engage with Network Rail and monitor progress in this area.

Other single till income (OSTI)

7.112 Most of Network Rail's other single till income (i.e. income that is not from regulated charges) comes from either: property related items, such as property rental or property sales, or other charges or contracts that are already in place (and which in some cases are not regulated by us).

7.113 We focused our assessment on Network Rail's property income by commissioning Cushman & Wakefield (C&W) to assess Network Rail's property income forecasts[56]. It concluded that Network Rail's forecasts were based on assumptions that were broadly reasonable, but that Network Rail should be able to generate more property income than it assumed in its SBP submissions.

---

[56] Network Rail Strategic Business Plan Property Income Forecast Review, C&W, May 2018.

7.114 Network Rail said that our estimates of £67m of additional property income for GB in the draft determination were not achievable. Instead, it suggested that it could deliver £25m of additional property income.

7.115 C&W has confirmed that its report took account of the issues raised by Network Rail in its response. However, it did agree that there was a misunderstanding with some data Network Rail provided, so it accepted Network Rail's view that its base forecast was £12m too high.

7.116 We also noted in the draft determination the assumption we used from C&W's work. The high end of its range is considerably higher than this assumption. We also note that Network Rail's proceeds from its sale of the commercial estate was for more than it originally expected, suggesting that the market has a more positive view about the potential revenue from property.

7.117 Given these points, we have adjusted for the £12m error but not for Network Rail's other views. Therefore, our additional property income assumption is now £55m for GB (of which £52m is in England & Wales and £3m in Scotland). The Scotland assumption is unchanged, as the £12m error did not affect Scotland.

7.118 The other main issue is that after Network Rail submitted its SBP to us it noted that it had omitted the Crossrail supplemental access charge income (CSAC)[57] it anticipates receiving in CP6. Since then, it has forecast this charge at between £250m and £300m for CP6, depending upon the cost of debt assumption. This information was not available when the SoFA was set. Reflecting this, we have discussed the treatment of this additional income with DfT.

7.119 Since our draft determination, the Crossrail project has been delayed, though not due to delays on Network Rail's on-network works. We understand that the CSAC income is still payable to Network Rail from period 10 of 2018-19 (if it was not Network Rail would receive finance charge income instead).

7.120 Using our real (RPI) 1.45% pre-tax cost of debt for CP6 we are forecasting that Network Rail will receive £274m in CP6 from this charge.

7.121 Given the uncertainty over how much of this income Network Rail will be able to spend, we have decided not to include CSAC income in the England & Wales revenue requirement calculation, as this would have overly complicated the risk funding process. Similarly, the requirements we have placed on the company do not rely on this income.

---

[57] The Crossrail track access option deed includes provision for payments by Crossrail, through supplementary access charges (SACs), to allow Network Rail to recover the costs relating to works for Crossrail that took place on its network. The costs will be recovered over the life of the assets concerned, and the SAC's include a finance cost component.

7.122 In CP6, if the CSAC that Network Rail will receive is not provided to the UK Government and it becomes available to Network Rail to spend, it should be treated as additional risk funding.

Funding assumptions

7.123 This chapter has discussed our assessment of Network Rail's forecast costs and income in CP6. Following on from this, chapter 10 summarises the overall financial changes we are proposing compared to Network Rail's SBP submission.

8. Financial framework and affordability

Overview

This chapter gives an overview of the key issues in the financial framework for CP6 and also our assessment of the affordability of the HLOSs against the SoFAs.

Introduction

8.1 The financial framework that we have set for Network Rail in CP6 reflects the significant changes that have happened since the company was reclassified as a public sector body in 2014. In particular, elements of the CP5 framework are now less relevant or redundant. Network Rail's closer relationship to the governments means that certain decisions by the UK and Scottish Governments have a direct bearing on Network Rail's financial framework.

8.2 We discussed these issues in our draft determination financial framework supplementary document, supporting January 2017 and March 2018 consultations on the PR18 financial framework and our December 2017 update letter.

8.3 In this chapter, we provide an overview of key areas of the financial framework: budget flexibility; financial risk management; central cost allocations; inflation indexation; our affordability assessments; and determination of revenue requirements.

8.4 In our final determination financial framework supplementary document, we have also set out decisions on a number of other financial issues:

■ setting and updating regulatory asset base (RAB) values for CP6;

■ determining cost of debt and weighted average cost of capital (WACC) values;

■ re-categorising other single till income for presentation purposes; and

■ discontinuing 'early start' provisions and corporation tax and VAT incentive mechanisms. However, we will reconsider the position for future periodic reviews if the funding structure for Network Rail changes significantly.

8.5 All the decisions we have made or confirmed below have been taken after considering responses to our previous financial framework documents and our draft determination. We provide more detail on the responses we have received and our views on them in our document summarising draft determination consultation responses.

Budgetary flexibility

8.6 When we made our PR13 determination for CP5, Network Rail was a private company limited by guarantee. As such, it had full budgetary flexibility, by which we mean the ability to move money between different years of the control period and to switch expenditure between operating expenditure and capital expenditure.

8.7 However, public sector bodies generally have limits on what money they can transfer between years, and are (currently at least) not permitted to transfer capital expenditure to operating expenditure. This reflects the need for governments to manage their overall budgets. With Network Rail now in the public sector, it is important for the governments that there will be appropriate governance of Network Rail's budgets in the new control period.

8.8 DfT set out the budgetary flexibility that Network Rail can expect to be allowed during CP6[58] in its response to our second consultation on the PR18 financial framework. The flexibilities will be the same for England & Wales, and for Scotland. This gives Network Rail more flexibility than most other arm's length public sector bodies.

8.9 The flexibilities are set out more fully in the financial framework supplementary document, but in summary they include the following:

■ Network Rail can defer up to 10% of capital expenditure budgeted for a particular year to a later year; and

■ it can defer up to 0.75% of resource expenditure[59] for the year concerned to a later year.

8.10 The budgetary flexibility rules that the UK Government has introduced for CP6 include 10% flexibility on annual capital expenditure. These rules apply to total annual renewals and enhancements expenditure. In our final determination, we have set out forecasts of renewals expenditure that are included in the charges income and network grants that Network Rail will receive in CP6.

8.11 However, there is more uncertainty with the profile of enhancement expenditure as it has not yet been decided. This is because the governments' approach for enhancements funding is changing for CP6 with the introduction of the England & Wales, and Scotland pipeline approaches explained above. Network Rail is discussing how these arrangements will work in practice with the governments. One of the issues is how to deal with changes to enhancement expenditure.

---

[58] Note that it is Network Rail's overall financial position that is consolidated into DfT's accounts, not just its operations in England and Wales.

[59] For this purpose, resource expenditure means operating expenditure less income (except grant income).

Financial risk management

Background

8.12 Like any company, Network Rail needs appropriate provisions in place to manage the risks it faces, such as inflation, cost shocks and adverse events, such as the storm damage at Dawlish. Up until CP5, Network Rail had been able to borrow money, should this have been required, to cover any such risks. However, since reclassification, this is no longer possible.

8.13 DfT did not include any funding within its SoFA to cover financial risks in CP6. It considered that this would not be appropriate, given Network Rail's status as an arm's length public sector body.

8.14 Reflecting this, in its strategic business plans, Network Rail included a £2,595m (in 2017-18 prices) contingency fund for Great Britain to enable it to manage risk (Network Rail called this the 'group portfolio fund' or GPF). Of the £2,595m, £660m was to be allocated to the routes, and around £1,935m was to be held corporately at a portfolio level[60]. None of the fund was committed for use upfront; it would be used if risks materialised. If routes needed additional contingency, they could bid for funding from the corporately held part of the GPF.

8.15 Network Rail's confidence in delivering its plans, based on the proposed expenditure levels, was around:

- 50%, with no risk funding;

- 60%, with the provision of route-level GPF funds; and

- 80%, with the additional provision of the centrally-held GPF funds.

8.16 If, as CP6 progressed, funds in the GPF were no longer needed to cover risk, Network Rail proposed to release money from it for network expenditure. There would be a competitive process for routes to bid to use the central portfolio fund for this.

Our view

8.17 We recognise that Network Rail needs appropriate risk provision, not least to avoid the problems that arose in CP5 from the re-planning that the company had to undertake to address cost overruns.

8.18 We have decided to use a hybrid approach to financial risk management that combines funding being held as a provision for financial risk at both route level and at

---

[60] £60m was allocated to the Scotland route, with £224m held corporately at the centre but ring-fenced for Scotland, reflecting that its funding arrangements are separate from England & Wales.

the centre. This includes contingent asset management funding held at a route level that could be deferred if financial risks materialise. If risks do not materialise, the contingent asset management funding can also be used to improve outputs.

8.19 Our final determination on risk funding levels is summarised in the financial framework [supplementary document](#). We have agreed with Network Rail that its total risk funding for England & Wales should be £2,311m (in 2017-18 prices).

8.20 However, our final determination is that the balance between risk funding held in the routes and the centre should be different. Deciding on the balance between the amount of risk funding to be held at route level and at the centre is, to some extent, a matter of judgement.

8.21 We have decided that half of the balance that Network Rail proposed for England & Wales to be held in the centre should be moved to the routes. This reflects our broad view that funding for risks such as those associated with severe weather events should be held by Network Rail at the centre, while funding for other risks such as inflation should be held at a route level. Accordingly, we have moved c. £0.9bn of the total risk funding from the centre to the routes.

8.22 This means that route plans will include two types of risk funding: route-controlled risk funding; and contingent asset management funding. The latter will be programmed into route plans as expenditure on projects that can be cancelled or delayed relatively easily (and without safety consequences) if risks do materialise.

8.23 We also expect routes to identify, in advance of CP6, the asset condition and performance improvements that the contingent asset management expenditure would support if risks do not materialise. These improvements would not be included in the initial scorecard targets. However, they would provide additional evidence to allow performance targets to be raised in the event that the risks facing Network Rail moderate, allowing additional work to be delivered.

8.24 This change would mean routes play a larger role in the management of this part of the risk funding than Network Rail originally envisaged. Although we would expect Network Rail to retain some central controls over this aspect of route spend (as it covers some company-wide risks), this would provide a clearer basis for understanding what the routes could deliver, where risk funds are available to be released.

8.25 Reflecting the above, the allocation of risk funding for England & Wales is:

■ route-controlled risk funding: £600m;

■ contingent asset management funding (held by routes): £856m; and

- centrally-held group portfolio fund (GPF[61]): £856m.

8.26 In our draft determination, we asked Network Rail to review its allocation of risk funding across the England & Wales routes. It has now done this and we have accepted its revised allocation. These allocations are shown in the route settlement documents.

8.27 Transport Scotland recognises that an efficient company needs to be able to manage financial risk. We consider that the total risk funding of £284m (in 2017-18 prices) proposed by Network Rail for Scotland is appropriate. Given that there is a separate funding arrangement for Scotland and that risk funding for Scotland will be ring-fenced from the amounts for England & Wales routes, we have decided that all risk funding for Scotland should be held at route level.

8.28 It is important that the governance arrangements that Network Rail puts in place for the management of financial risk are appropriate and support continued devolution of operational management to the routes. Network Rail reviewed its proposed governance arrangements in the summer and has now said that it will involve route managing directors more fully in the process.

8.29 We have provided updated views on the governance that we consider should apply to the use of risk funding in CP6 after further discussions with Network Rail, and we have outlined the key principles for managing risk funding that we expect Network Rail to adopt.

Central cost allocations

8.30 We have reviewed Network Rail's central cost allocations to routes in its business plans for CP6. Our review had particular regard to allocations to the Scotland route because of the separate funding provisions that apply to Scotland and its materiality to Transport Scotland.

8.31 Following our draft determination, we have had detailed discussions with Network Rail, DfT and Transport Scotland on the allocation of costs to routes. The result of these discussions was that we thought Network Rail had taken a reasonable approach to the allocation of central costs across routes in its SBP. Following our review, we have decided not to make any changes to the cost recharges for central functions that Network Rail has included in its strategic business plans.

8.32 Reflecting Network Rail's commitment to continuous improvement in this area and the importance of route-level regulation, we expect Network Rail to keep the methods

---

[61] In Network Rail's submissions to us in PR18, it has tended to describe amounts of money for risk funding as being the Group Portfolio Fund (GPF). In our final determination, we refer to GPF in the context of centrally-held risk funding, as opposed to that held by the routes.

it uses under review in CP6 and where appropriate update its methodology, for example, where better data is available. We would discuss the implications and timing of any potential changes to the methodology with Network Rail's routes and centre, DfT and Transport Scotland.

Inflation indexation

8.33 In CP5, Network Rail's RAB, access charges, and payment rates in other mechanisms where we set the method of indexation, have been indexed using the retail prices index (RPI) measure of inflation. Following consultation, our final decision is that in CP6, the consumer price index (CPI) should be used instead.

8.34 This change reflects recent trends by other regulators to move away from RPI, given that CPI is a more accurate and robust measure. Further, as Network Rail can no longer borrow money on the debt market, it will no longer be exposed to movements in RPI on index-linked debt.

8.35 As noted in paragraph 1.57 of our second financial framework consultation, there should be a limited direct impact on Network Rail of a switch from RPI to CPI indexation because in our determination:

■ Network Rail's revenue requirements in cash prices should be the same (because we will increase the expenditure forecast to take account of lower expected indexation increases); and

■ we will adjust our determination of fixed track access charges and/or annual network grants[62] to take account of lower levels of income from variable track access charges (as explained in the next paragraph).

8.36 In our second financial framework consultation, we commented that a switch to CPI would result in a relatively higher increase for access charges at the start of CP6, but relatively lower indexation increases during CP6.

8.37 The yearly variable usage charges (VUCs) and electrification asset usage charges (EAUCs) will be indexed by CPI. Also, in broadly the same way that we are adjusting Network Rail's expenditure assumptions for the RPI/CPI differential, we will also adjust VUCs and EAUCs for franchised and open access operators.

8.38 However, as discussed in chapter 9, we have separately announced proposals to cap/phase-in increases to the VUCs for freight and charter operators. Reflecting this, there will be no upward adjustment to these VUCs and EAUCs for the RPI/CPI

---

[62] This will not increase network grant payments above any government caps.

differential at the start of CP6 for these operators. The charges will be indexed to CPI each year.

Affordability

8.39 As part of the periodic review, we must assess whether there are sufficient funds available in a SoFA to deliver the associated HLOS. If there are insufficient funds, we must notify the relevant government, which may then revise its HLOS and/or SoFA.

8.40 We have assessed whether there are sufficient funds available in the governments' SoFAs to deliver what each government wants Network Rail to deliver in CP6, as set out in their respective HLOSs.

8.41 Network Rail considers that its strategic business plans for CP6 and the effect of its updates are affordable in the context of the governments' HLOSs and SoFAs. In our affordability assessments, we have considered England & Wales and Scotland separately in light of the separate funding and determination provisions for Scotland.

8.42 We have taken the following into consideration:

■ safety, operational performance and capacity requirements;

■ views expressed by the UK, Scottish and Welsh Governments and in the statutory guidance to ORR;

■ views expressed by industry stakeholders;

■ the overall funding structure for Network Rail in CP6, including separate grant funding for most new enhancements, legacy debt liabilities, British Transport Police costs and corporation tax costs;

■ our assessments of the efficiencies that are achievable and whole life infrastructure costs; and

■ risk funding availability and the degree of budgetary flexibility available to Network Rail in CP6.

England & Wales

8.43 The Secretary of State's SoFA set out the funding for Network Rail in CP6.

8.44 As shown in Table 8.1, we consider that Network Rail's expenditure requirements to deliver the Secretary of State's HLOS requirements can be met by the available SoFA funding. As such, we consider that the HLOS for England & Wales is affordable.

8.45 Total expenditure in the final determination is £1.8bn higher than the assumption in DfT's SoFA, largely due to higher traction electricity costs of £1.3bn and other factors.

8.46 Total income in the final determination is £1.8bn higher than in DfT's SoFA, largely because of increased traction electricity income of £1.3bn (to recover increased traction electricity costs). Also, VUCs will be higher due to higher rates in CP6 than assumed in the SoFA and possibly the effect of higher traffic forecasts.

Table 8.1: England & Wales affordability position

£m, cash prices	SoFA	Network Rail's SBP	Final determination
Variable charges	n/a	(5,968)	(7,008)
Fixed charges	n/a	(5,295)	(4,725)
Schedule 4 access charge supplement (ACS) income	n/a	(1,561)	(1,502)
Schedule 4 expenditure	n/a	1,611	1,502
Net Schedule 4 & 8	n/a	50	0
Total charges	**(10,200)**	**(11,213)**	**(11,732)**
Other single till income	(1,604)	(1,806)	(1,867)
Other operating income	(1,396)	(1,396)	(1,355)
Network grants	(24,300)	(24,300)	(24,300)
Enhancements	(10,400)	(10,400)	(10,400)
Total income	**(47,900)**	**(49,115)**	**(49,655)**
Operating costs	17,300	19,501	20,046
Renewals	20,200	16,575	16,544
Risk funding	0	2,639	2,665
Enhancements*	10,400	10,400	10,400
Total expenditure	**47,900**	**49,115**	**49,655**
Balance	**0**	**0**	**0**

* We have included enhancements in both income and expenditure because they were included in the SoFA. However, we have not assessed them as part of PR18.

Scotland

8.47 The Scottish Ministers' SoFA covered Network Rail's operations, support, maintenance and renewals (OSMR) costs and included some funding during CP6 for railway improvements but did not include other non-Network Rail income and expenditure. These improvements are not restricted to enhancements on Network Rail's network but could also include improvements to non-Network Rail parts of the railway in Scotland. For example, service based and/or rolling stock solutions. The approach to investment will be governed by the Scottish Government's Rail Enhancement and Capital Investment Strategy (available here).

8.48 For our affordability assessment, we only needed to consider Network Rail's OSMR plan. But to do this we required clarity from Transport Scotland about how much funding in its SoFA was for Network Rail's OSMR (net of OSTI). Transport Scotland confirmed before the draft determination that the funding available for enhancements and other industry improvements on the railway in Scotland will be the balance left after our assessment of the costs of Network Rail's OSMR (net of OSTI).

8.49 Table 8.2 shows the income and expenditure required to fund Network Rail's OSMR plan in Scotland. It shows that the outputs required by Transport Scotland's SoFA are affordable. The income shown in the table is lower than the total funding in Transport Scotland's SoFA because we have not included the funding available for enhancements and other industry improvements, as this is outside the scope of our determination. We are discussing with Transport Scotland and Network Rail how the remaining balance in the SoFA should be treated.

8.50 The income and expenditure assumptions in the PR18 determination column reflect the changes that have happened to the forecasts since Transport Scotland's SoFA was published.

8.51 Total expenditure in our final determination for Scotland is approximately £0.2bn higher than assumed in the Scotland SoFA, largely because of increased traction electricity costs (c. £0.1bn). Traction electricity costs increased because traffic forecasts and rates have both increased.

8.52 Total income in our final determination for Scotland is approximately £0.2bn higher than assumed in the Scotland SoFA largely because of the previously mentioned increases to traction electricity (c. £0.1bn). Also, other variable charges have increased, mainly VUC, because of higher rates and traffic forecasts.

8.53 We accepted Transport Scotland's proposal on Fixed Track Access Charges (FTAC), so they are £1.5bn, which is £0.4bn higher than the SoFA assumption. This increase is more than offset by a reduction in network grants of £0.5bn compared to the assumption in the SoFA.

8.54 There are some HLOS requirements that Network Rail has not costed yet, e.g. the gauging strategy. This is because how Network Rail intends to deliver these requirements will not be clear until it provides its plans to ORR in November 2018[63].

8.55 In addition to the steps that Network Rail will take during CP6 as business as usual to deliver these requirements, it may identify enhancement opportunities, for example, to deliver journey time improvements. Such enhancements would need to go through the CP6 enhancements pipeline process and the Scottish Ministers would decide whether or not they are funded.

8.56 Transport Scotland considers that the gauging strategy for Scotland should be dealt with as part of the day job and therefore included within the CP6 funding envelope for OSMR, particularly given its obligations requiring it to maintain the capability of its network.

8.57 However, Network Rail has not included the cost of delivery of the gauging strategy in its SBP[64]. As Network Rail is not yet in a position to confirm costs for delivering the gauging strategy it cannot be funded from the OSMR envelope included in our final determination, as the costs are not yet known. Instead, these costs can be funded from the balance that is available in the SoFA.

8.58 Once better cost estimates are available, the Scotland route will present its case for funding the Scottish gauging strategy to Transport Scotland and it will decide whether to provide these funds. If Transport Scotland does not provide the incremental funding from the SoFA balance (i.e. in addition to the OSMR envelope in our final determination) then the Scotland route would not be required to deliver it.

---

[63] The current expectation is, however, that apart from delivery of the Scottish gauging requirement, all other requirements will not incur additional costs.

[64] A thorough review of the whole of the Scottish network was required in order to provide estimated costs for this work, which could not be completed in advance of the final determination. The process of the Scotland route reviewing what work is required, and then consulting on that proposal, will provide more accurate cost estimates. We will also undertake further analysis of the Scotland route's plan for the gauging strategy, once it has provided its draft proposals. If necessary, we will commission an independent review of Network Rail's plans and proposed costs to provide assurance to Transport Scotland and other stakeholders.

Table 8.2: Scotland affordability position

£m, cash prices	SoFA	Network Rail's SBP	Final Determination
Variable charges	(269)	(476)	(621)
Fixed charges	(1,100)	(1,100)	(1,500)
Schedule 4 ACS Income	n/a	(130)	(81)
Schedule 4 expenditure	n/a	140	81
Net Schedule 4 & 8	14	10	(0)
Total charges	**(1,355)**	**(1,565)**	**(2,121)**
Other single till income	(98)	(131)	(127)
Other operating income	(110)	(109)	(88)
Network grants	(2,794)	(2,794)	(2,245)
Total income	**(4,357)**	**(4,600)**	**(4,581)**
Operating costs	1,747	1,925	1,918
Renewals	2,360	2,349	2,332
Risk funding	250	325	330
Total expenditure	**4,357**	**4,599**	**4,581**
Balance	**0**	**(1)**	**0**

Revenue requirements

8.59 In our second financial framework consultation, we confirmed that we would use a 'building blocks' approach to calculate the revenue requirement, taking account of Network Rail's OSTI, and explained how we would present the FNPO and SO revenue requirements in the totals for England & Wales, Scotland and Great Britain.

8.60 As explained in that document, our determination of revenue requirements for OSMR in CP6 will form part of a bigger funding picture for CP6, with some expenditure being separately funded by the governments, i.e. it is not included in the revenue requirements. This includes the non-SoFA expenditure that will be funded directly by the UK Government under separate arrangements in CP6, i.e. payments for legacy debt liabilities, British Transport Police costs and corporation tax liabilities. It also includes enhancements for HS2, which are outside of the Secretary of State's SoFA.

8.61 In our PR18 final determination supplementary document on the final framework, we set out the way that revenue requirements will be recovered through charges and network grant payments in CP6. In particular, we explain our approach to the mix between network grants and fixed track access charges (FTAC) income.

8.62 Our revenue requirements for CP6 take account of the targeted updates that Network Rail has made to its strategic business plans over the summer of 2018 and its response to our draft determination.

8.63 The tables below show a summary of our CP6 revenue requirements and a comparison of the main changes from the draft determination to the final determination. The changes are explained in our final determination supplementary documents: review of Network Rail's proposed costs and other single till income.

Table 8.3: Summary of our CP6 revenue requirements[65]

£bn, 2017-18 prices	Great Britain	England & Wales	Scotland
Operations	3,426	3,186	239
Support	2,609	2,314	295
Maintenance	7,692	6,977	715
Renewals	16,642	14,581	2,061
Schedule 4 & 8	1,549	1,471	79
Traction electricity, industry costs and rates	4,328	3,966	362
Route-controlled risk funding	884	600	284
Contingent asset management funding	856	856	0
Route contribution to group portfolio fund	856	856	0
RPI/CPI differential adjustment[66]	1,384	1,234	150
Gross revenue requirement	**40,225**	**36,040**	**4,185**
Other single till income	(2,767)	(2,589)	(179)
Net revenue requirement	**37,457**	**33,451**	**4,006**
Variable charges	(3,042)	(2,757)	(285)
EC4T	(2,856)	(2,648)	(208)
Schedule 4 ACS	(1,453)	(1,379)	(74)
FTAC	(5,699)	(4,326)	(1,372)
Network Grant	(24,290)	(22,232)	(2,058)
RPI/CPI differential adjustment	(117)	(109)	(8)
Total SoFA related income	**(37,457)**	**(33,451)**	**(4,006)**

---

[65] The variable charges and OSTI numbers differ from the affordability analysis because of the different ways of categorising these income streams between the SoFA and Network Rail's SBP. A reconciliation between the two can be found in the financial framework supplementary document.

[66] The RPI/CPI differential takes account of lower expected indexation increases during CP6 as a result of the move from RPI to CPI, for more detail see our supplementary document on the financial framework'.

Table 8.4: Comparison of main changes from draft to final determinations

£m, 2017-18 prices	Draft determination			Network Rail response			Final determination		
	GB	E&W	Scotland	GB	E&W	Scotland	GB	E&W	Scotland
Efficiency/ headwinds	(659)	(586)	(73)	(491)	(428)	(63)	(491)	(428)	(63)
Asset sustainability	870	870	0	558	538	20	538	518	20
Increased renewals costs	0	0	0	50	0	50	50	0	50
Property income	(67)	(64)	(3)	(25)	(24)	(1)	(55)	(52)	(3)
Safety expenditure	80	80	0	80	79	1	80	79	1
British Transport Police	(40)	0	(40)	(40)	0	(40)	(40)	0	(40)
Performance innovation fund	10	9	1	10	9	1	40	36	4
Research and development	(341)	(309)	(32)	(195)	(174)	(21)	(195)	(174)	(21)
Other operating income	0	0	0	0	0	0	3	0	3
Total	**(147)**	**0**	**(147)**	**(53)**	**(0)**	**(53)**	**(70)**	**(21)**	**(49)**

9. Charges and incentives

Overview

This chapter provides an overview of the process we have followed to reach our decisions on access charges and contractual incentives for CP6. It also summarises our conclusions on the variable usage charge (VUC) and infrastructure cost charges (ICCs), and sets out our approach to recalibrations of Schedule 8 during CP6.

9.1 We have reviewed the structure of the charges levied for use of the network and the incentives in place on Network Rail and train operators. This is important because charges and incentives affect the decisions that Network Rail, train operators and funders make, influencing both the cost of maintaining and renewing the network and how efficiently network capacity is used. They can therefore play an important role in improving outcomes for passengers, freight customers and taxpayers.

9.2 Charges also provide one of Network Rail's major sources of income, alongside the grants received from DfT and Transport Scotland. The Secretary of State's SoFA set out the maximum level of grant funding, and his assessment of Network Rail's income requirement from all other sources, including the maximum level of access charge payments for franchises in England & Wales.

9.3 This chapter includes:

■ an overview of the process we have followed for the review of charges and incentives for PR18;

■ a summary of our decision for capping/phasing-in the VUC; and

■ a summary of our decisions on ICCs.

The review of charges and incentives for PR18

9.4 We have been working on the review of charges and incentives since 2015, and our first consultations on the regimes came at the end of that year. As this work progressed, we focused on three main changes: simplifying the regimes; improving the transparency of Network Rail's fixed costs; and working towards changes to how fixed costs are recovered to support competition on the network.

9.5 Our review covered the following policy areas:

■ charges recovering fixed network costs: the fixed track access charge (FTAC), the freight specific charge (FSC) and the freight only line (FOL) charge in CP5. For CP6, the FSC (which now incorporates the FOL) and FTAC will be collectively known as infrastructure cost charges (ICCs);

- stations charges: the station long term charge and the qualifying expenditure (QX) management fee at managed stations;

- variable charges: the VUC, capacity charge, coal spillage charge, electrification asset usage charge (EAUC) and traction electricity charges (also known as electric current for traction or 'EC4T'); and

- the following financial incentives: the Schedule 4 possessions regime, the Schedule 8 performance regime and the route-level efficiency benefit sharing (REBS) mechanism in track access contracts, and the volume incentive.

9.6 Our review takes the same approach for all charges and incentives. It is divided into three phases:

(a) the policy phase – establishing the intent and design of the policy;

(b) the recalibration phase – updating contractual parameters to reflect policy changes, methodological improvements and/or the latest evidence; and

(c) the implementation phase – implementing our decisions through changes to track and station access contracts.

9.7 Our 'Overview of charges and incentives decisions' supplementary document sets out the formal decisions we have made to date in each of these phases for each charge and incentive. Annex A of that document provides a high-level overview of the charging structure for CP6, for different types of operators.

9.8 Our final determination decisions are consistent with the high-level decisions that we have already set out in respect of the charges that train operators will pay and the financial incentives in place to encourage improved performance on the network. This will lead to a major simplification to charges and incentives, with the removal of REBS, the volume incentive, capacity charge and coal spillage charge, and simplification of other freight charges.

9.9 Our explanatory note on the charges and incentives impacts model sets out how we have taken the impacts of our proposals on charges and incentives into account when proposing CP6 levels for the VUC and ICCs.

9.10 The following sections provide a summary of the process we followed in each phase.

Charges and incentives – policy phase

9.11 We have followed the same approach to policy making across all charges and incentives.

9.12 We started by consulting with stakeholders on the priority areas for improvement, and then we worked with industry to develop options that would deliver improvements in

these priority areas. All the options that were developed were assessed using a consistent framework of objectives and criteria, and we invited stakeholder input into our assessments before arriving at our final proposals. Across the different charges and incentives, our work at each of these stages was informed by the findings of the Rail Delivery Group's (RDG's) review of charges and incentives.

9.13 As part of the final determination, we are concluding on outstanding policy issues in relation to the VUC and ICCs. We provide a summary of each of these conclusion documents below.

9.14 All the charge and incentive policy decisions we have taken for CP6 are summarised in the supplementary document on charges and incentives available here.

Charges and incentives – recalibration phase

9.15 Recalibration work is close to completion for all charges and incentives. This work has involved updating the underlying parameters of the charges and incentives. For the VUC, for example, this has involved reflecting factors such as changes to Network Rail's costs and patterns of traffic on the network. It has been delivered, variously, by Network Rail, RDG, industry working groups or ORR.

9.16 The recalibration leads for each charge or incentive have followed a common approach. A detailed description of this approach, which was agreed with industry, is available on our website (here).

Charges and incentives – implementation phase

9.17 In July 2018, we consulted on proposed wording for the revised CP6 versions of Schedules 4, 7 and 8 of track access contracts (to reflect our proposed decisions). Having fully considered the responses, we will publish our conclusions, along with the final version of the amendments we will be directing to be made to track and station access contracts, in December 2018.

Conclusions on our 'Variable usage charge in CP6' consultation

9.18 Our final policy position on the VUC is summarised below. For further detail on the background to the VUC and our capping/phasing-in policy, please see our supplementary document 'Conclusions to our consultation on the variable usage charge in CP6'.

Background to the VUC

9.19 The VUC is a charge designed to recover the operating[67], maintenance and renewal costs that vary with marginal changes in traffic. It does not reflect the costs of providing or changing the capability or capacity of the network.

9.20 The VUC makes up c.15% of the total charges income received by Network Rail but constitutes the majority of the charges paid by some train operators.

9.21 The charge is disaggregated by vehicle class and freight commodity to increase the cost reflectivity of the charge. Broadly, heavier and/or faster vehicles incur a higher VUC, reflecting the relatively higher levels of damage that they cause.

PR18 work on VUC

9.22 In June 2017, we concluded on our consultation on changes to charges and contractual incentives. These conclusions stated that there would not be a fundamental review of the VUC. However, the charge would be subject to recalibration by Network Rail as part of the PR18 process (in line with other charges).

9.23 Both our December 2016 charges and contractual incentives consultation, and Network Rail's July 2017 consultation on variable and station charges in CP6 asked for, and/or proposed, minor methodological changes to the charging methodology. We confirm our support for these proposed improvements to the VUC and these amendments will be implemented in CP6.

Policy considerations

9.24 The cost of repairing the wear-and-tear that train operators cause to the network is forecast to be significantly higher than in CP5. This is due primarily to a deterioration in Network Rail's efficiency and the capping of the VUC for certain operators in PR13. Without policy intervention, the (uncapped) VUC would have to increase materially in CP6 to meet these costs.

9.25 EU and UK legislative requirements mean that costs directly incurred have to be recovered from train operators. There can be capping/phasing-in of any increase in charges but it must not be open-ended or indefinite; there must come a time when full costs are charged. Our decision should also be credible over time and not, for example, imply an extremely unlikely change in charges at the next review.

---

[67] In practice, rail infrastructure operating costs are widely understood not to vary materially with traffic, and the charge was set in CP4 to recover variable maintenance and renewal costs only.

9.26 When considering the capping/phasing-in of charges we have also had regard to:

- our statutory duties – in particular, we are mindful of the benefits of keeping charges to certain train operators at a sustainable and predictable level;

- the expected change in train operators' total variable charges – this is particularly important in CP6 as we have already announced some significant changes to variable charges, as part of our wider simplification of charges. In particular, we have decided to remove the capacity charge for CP6, which leads to a significant reduction in one element of total variable charges; and

- the variability of individual and (for freight) commodity rates – there is considerable variation in the extent to which VUC rates are set to increase in CP6 due to differing impacts of the PR18 recalibration and the unwinding of the CP5 caps (which we set in our PR13 final determination).

Our June 2018 consultation

9.27 Our proposals outlined in our June 2018 VUC consultation were broadly welcomed by stakeholders. However, freight operators raised concerns about the increases in variable charges; an increase principally caused by the higher cost of repairing the wear-and-tear caused by use of the network. In particular, these operators argued that our proposals for capping and phasing-in these increases did not go far enough.

9.28 We have considered these arguments carefully, and are of the view that our proposals strike the right balance between the need to protect operators and freight users from unexpected, large changes in total variable charges and the importance of charges moving towards the costs caused through the use of the network. This establishes a credible path towards cost-reflectivity over time, providing appropriate incentives on operators to reduce the costs they cause on the network. We are, therefore, confirming our earlier position on the capping and phasing-in of variable charges.

Our PR18 capping/phasing-in policy

9.29 Against this background, our approach to cap/phase-in the VUC for certain operators can be summarised as follows.

- The following policy will not apply to franchised operators nor to open access passenger operators. Franchised operators are 'held harmless' by their franchise agreements and open access passenger operators are not forecast to incur a material increase in their total variable charges in CP6.

- The capping/phasing-in policy will apply to freight and charter operators who are forecast to incur material increases in their (uncapped) total variable charges in CP6. North Yorkshire Moors Railway's services and West Coast Railway

Company's Jacobite services will also be subject to the capped VUC transition profile.

■ The increase in costs will be reflected in the VUC for capped operators in CP6 based on a transition to cost-reflectivity over a ten year period (i.e. over CP6 and CP7).

■ In years 1 and 2 of CP6, total variable charges (including forecast VUC, EAUC and EC4T, the capacity charge and the coal spillage charge[68]) for the freight and charter operator sectors will be held constant in real terms (i.e. equal to the final year of CP5). This will necessitate an increase in the VUC charge in year 1 to offset the fall in other variable charges due to the removal of the capacity charge and the coal spillage charge in CP6.

■ In the following three years of CP6, the VUC for each individual vehicle will be based on a straight-line transition to full cost reflectivity by the end of CP7 (i.e. reaching the current estimates of the uncapped charges level).

■ In line with our decision to change our indexation approach for PR18, the indexed variable charges (VUC and EAUC) for all operators will be linked to CPI in CP6. However, for capped operators there will be no increase to the opening CP6 rates for these charges to adjust for the change from RPI to CPI. In contrast to franchised and open access operators, they will retain the forecast benefit from this change. By the final year of CP6, operators benefitting from capping/phasing-in ('capped operators') are forecast to pay rates that will be approximately 5% lower under CPI than RPI, in nominal/cash terms.

9.30 This means that, as illustrated in Figure 9.1, capped operators will benefit from a two-year 'adjustment period' during which there will be no increase in their total variable charges in real terms (shown in dark blue). The transition to uncapped levels is then based on a steady straight-line 'glide path' to the end of CP7.

---

[68] The capacity charge and coal spillage charge are to be removed in CP6 but are included in the calculation of total variable charges in the final year of CP5.

Figure 9.1: The transition profile for capped operator groups[69]
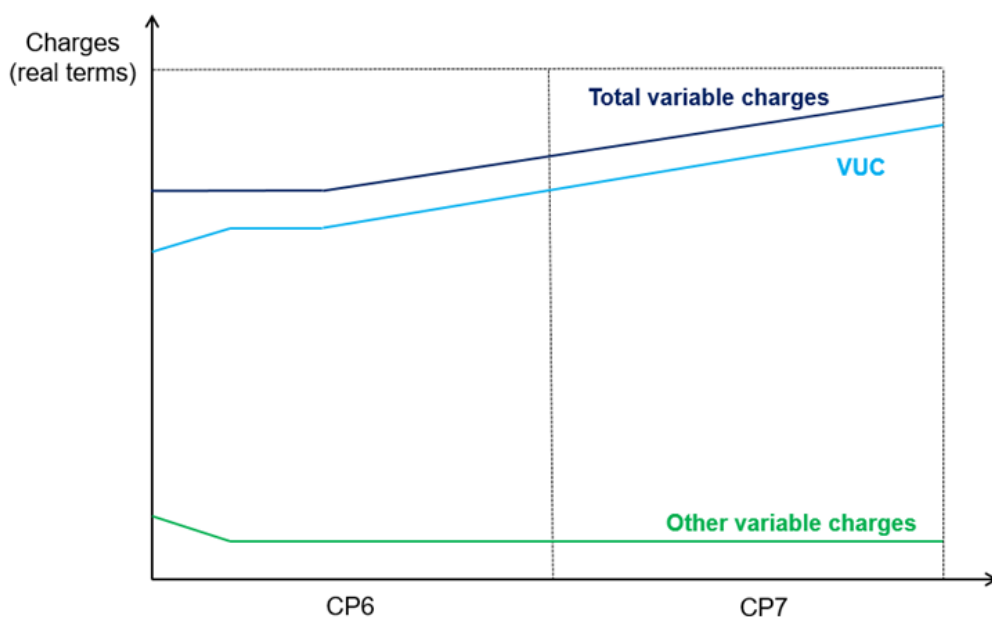
Indicative impact of our proposal

9.31 We present high-level numbers below to illustrate the estimated impact of the capping/phasing-in policy, updated to include any recalibration amendments since our June 2018 consultation. These figures are presented in 2017-18 prices and do not incorporate the impact of the move to CPI for the indexation of track access charges in CP6.

9.32 Capped operators are forecast to benefit from their affected charges being inflated by c.1% less per year than would have been the case under RPI. By the final year of CP6, they are forecast (in nominal terms) to pay rates which will be approximately 5% lower under CPI than RPI for indexed charges.

9.33 Table 9.1 presents a summary of the forecast average impact of the above capping/phasing-in policy on total variable charges for freight and charter operators. It shows the increase in the charges from the last year of CP5 ('close CP5') to the levels that would apply in CP6 if the VUC were not capped or subject to any phasing-in. The impact of capping/phasing-in can then be understood by considering: how average charges across the five years of CP6 relate to this 'close CP5' level; and how they compare to the charges in the final year of CP6.

9.34 As noted above, there is significant variation in the individual and (for freight) commodity rates around these average increases with some rates rising by more and others by less than the average.

---

[69] This diagram is not generated directly from the underlying data and is illustrative only.

Table 9.1: Forecast average increase in total variable charges[70] relative to the final year of CP5 for the freight and charter operator sectors

	Uncapped increase from close CP5 to CP6	Capped increase averaged across CP6	Capped increase from close CP5 to final year of CP6
Freight	26%	4%	10%
Charter	13%	2%	5%

Note: 2017-18 prices, constant traffic (2018-19), and uses ORR's final determination assumptions on efficiency. This provides an approximate indication of changes to average charges, before taking account of the change from RPI to CPI indexation.

9.35 As a result of the two-year adjustment period, there will initially be two years where total variable charges will increase by CPI. This will be followed by an average increase of CPI plus 3.2% and 1.6% per annum over the last three years of CP6 for freight and charter operators respectively. As noted above, the switch to CPI will reduce annual charges increases by approximately one percentage point per year, compared to the current approach of using RPI.

9.36 As explained above, the VUC for capped operators is driven by the transition profile set out for total variable charges. There will be an increase in the VUC above CPI in the first year of CP6 (to offset the removal of the capacity charge and the coal spillage charge). The VUC will then increase by only CPI for one year (to deliver the two-year total variable charges adjustment period), and then increase at a rate above CPI to deliver the above increases in total variable charges.

9.37 Increases in the VUC for freight and charter operators are set to increase to reflect the full costs of wear-and-tear on the network towards the end of CP7, subject to our review of charges in PR23.

9.38 Due to the differing impacts of the PR18 recalibration and the unwinding of CP5 caps, there is considerable variation in the changes to the individual vehicle and (for freight) commodity rates around the average figures presented in Table 9.1. We have analysed the potential impact of the proposed increases in variable charges in CP6 across the various freight commodity segments[71]. The proposed increase in total variable charges is not expected to result in a material contraction of any of the freight commodity segments. More generally, the capping/phasing-in will prompt higher rail freight volumes than would otherwise occur.

9.39 ORR is committed to supporting the growth and development of the rail freight industry, a position that is consistent with that of DfT and Transport Scotland. We

---

[70] Including the VUC, EUAC, EC4T, the capacity charge and the coal spillage charge as applicable.

[71] This analysis used Network Rail's July 2018 draft CP6 price lists, which were consistent with our draft determination.

have sought to apply considerable flexibility in our approach to variable charges in CP6, supported by earlier stakeholder input into how the legislative requirements could be interpreted. We consider that the PR18 charging policy strikes the right balance between our statutory duties, and provides an approach that supports longer-term stability and predictability in charges for freight operators in CP6 and beyond.

Next steps

9.40 In December 2018, Network Rail will publish the final price list[72] reflecting the capping/phasing-in of the VUC as set out above.

Conclusions on our 'infrastructure cost charges' consultation

9.41 A key area of reform of charges and incentives was related to charges that recover Network Rail's fixed costs (i.e. those costs that do not vary with use in the short term). These charges, which we called infrastructure cost charges (ICCs), are recovered as 'mark-ups' (i.e. charges above costs directly incurred) under the relevant European and domestic legislation.

9.42 In CP5, Network Rail's fixed costs have been met through a mix of direct grant from governments, mark-ups paid by freight services carrying specific commodities, and fixed charges paid by franchised passenger operators.

9.43 In our June 2017 charges and incentives conclusions document (available here), we confirmed we would continue to work to extend fixed cost recovery to all operators, subject to test of what the market can bear (referred to as the market-can-bear, or MCB, test).

9.44 During 2017 and earlier in 2018, we worked with industry to develop our proposals in this area. We consulted on aspects of our ICC policy in September 2017 (available here). This consultation set out proposals in relation to the market segmentation for freight services and which freight market segments should be in scope for ICCs (or mark-ups) in CP6. We also set out a possible approach to segmentation for passenger services, and proposals around the design of charges for passenger services.

9.45 Following the close of our September 2017 consultation, we commissioned further analysis around the biomass market by MDS Transmodal. We also worked with stakeholders to understand the impact of our proposals in more detail.

---

[72] The price list will include prices by vehicle and commodity type (for freight).

9.46 In June 2018, we consulted on final proposals for all aspects of our ICC policy (and levels) in our PR18 draft determination [supplementary document](#) on ICCs. We received responses from a range of stakeholders.

9.47 Few stakeholders responded to our draft determination ICC proposals for freight. Network Rail remained supportive of our proposals. However, electricity supply industry (ESI) biomass stakeholders remained unsupportive of allowing Network Rail to levy charges on freight services carrying ESI biomass. Drax suggested that the ICC on ESI biomass (if it were to be introduced) should be phased-in similarly to when the FSC was introduced for ESI coal, iron ore and spent nuclear fuel in CP5.

9.48 Respondents remained largely supportive of our open access proposals. However, stakeholders were concerned about the lack of detail we had released about the definition of the interurban market segment, the characteristics of a significant variation to an existing service, and the changes to the access policy (including changes to the 'not primarily abstractive' (NPA) test). Respondents were mixed in their support for our proposed level of the ICC for new interurban open access services. There was also concern about how recently approved services would be treated in the new charging regime.

9.49 The responses to our June 2018 consultation are explored in more detail in the [conclusions document](#) and [responses document](#).

9.50 We concluded on many aspects of our ICC policy in our final determination [supplementary document](#) on the ICC. The key conclusions we have set out are to:

■ use Network Rail's new cost allocation methodology, excluding the elements of the methodology that allocate non-avoidable costs to services, to set ICCs for CP6;

■ continue to allow Network Rail to levy ICCs on freight services carrying ESI coal, iron ore and spent nuclear fuel in CP6. Charges for these market segments will be set to keep the overall level of charges constant (per thousand gross tonne miles (kgtm)) between CP5 and CP6;

■ confirm ESI biomass as a market segment able to bear ICCs in CP6, given the limited impact an increase in rail charges would have on the volume of electricity generated from biomass, or on the volume of biomass transported by rail. ICCs for biomass in CP6 will be set at a conservative level and phased in over CP6 using the same profile used to phase-in the FSC in CP5[73]. The final ICC will be published in Network Rail's CP6 price list in December 2018;

---

[73] The profile will be: zero for the first two years of CP6, 20% in year 3, 60% in year 4, and 100% in year 5. Further details are set out in our supplementary document.

- not define any further market segments for franchised passenger operators;

- define two market segments for open access services: interurban and other services. We determined that services in the interurban market segment are able to bear ICCs in CP6;

- not levy ICCs on existing open access services in CP6, unless they apply for (and are granted) different access rights that fall within the interurban market segment, based on an updated access policy;

- confirm that ICCs for new entrant open access operators will be phased in according to the profile set out in our supplementary document. The level of ICCs for interurban services will be set conservatively at £4 per train mile; and

- vary ICCs (FTACs) for franchised passenger operators based on variations in timetabled train miles (on an annual basis, and adjusting them ex-post to reflect outturn). To limit Network Rail's exposure on the downside we have set a cumulative floor for the whole control period of 5% (1% per annum) for the percentage decrease in a franchised passenger operator's timetabled traffic that is reflected in its ICC adjustment.

9.51 We will be consulting on implementation issues for levying an ICC on new interurban open access services towards the end of 2018. More information on this implementation policy work is set out in chapter 10 of this document.

9.52 The decision to annually adjust franchised passenger operators' ICCs for variations in timetabled traffic is subject to further work with Network Rail to confirm that the approach for setting franchised passenger operators' timetabled traffic baselines is robust. Chapter 10 sets out more information on this work.

9.53 Further information is set out in our ICC supplementary document and the final impact assessments on the Network Rail methodology for allocating fixed costs (available here) and the design of franchised passenger operators' ICCs (available here).

Contingency for a delay to the implementation of PR18 and future periodic reviews

9.54 After we issue review notices in December 2018, Network Rail will have a period of time in which to decide whether to object to our decisions. If it does so, we may then make a reference to the Competition & Markets Authority (CMA) for it to determine the matter.

9.55 If Network Rail did object, it would not be possible to implement PR18 for the start of CP6. As the Railways Act 1993 does not include a contingency arrangement for this,

it would mean that the CP5 charges would, in most cases, expire. In PR08 and PR13, we asked train operators to agree an amendment to their track access contracts with Network Rail to include a contingency arrangement. This essentially provided that, if there was a delay to implementation, the changes to access contracts that we set out in our review notice would be implemented on a temporary basis, until the periodic review could be finalised (e.g. once the CMA had made a decision). The access charges applied in the interim period would then have been subsequently unwound, once the final charges were implemented (i.e. the permanent charges would have been applied retrospectively to the start of the control period).

9.56 We recognise that, in practice, Network Rail's status as a public sector arm's-length body may make it less likely to consider itself able to object under the statutory process. Nonetheless, it is important that, if it were to do so, it would have sufficient funding to continue to operate.

9.57 Reflecting this, in our draft determination, we proposed that the same contingency arrangement used in previous reviews should be used in PR18. We also proposed that we should make the contingency provision a standard provision in track access contracts from CP6 onwards. The intention being to reduce the administrative burden in PR23 and beyond, as we would not have to ask train operators and Network Rail to make the amendment in future periodic reviews.

9.58 There were no objections to our proposals on the contingency arrangement. Reflecting this:

■ following the final determination, we will write to Network Rail and train operators asking them to enter into the contingency arrangement so that it applies for PR18. We will also set out how we have taken account of the comments that we received on the proposed provision (a draft of which was included in our July 2018 consultation on implementation[74]); and

■ we will make the provision a model clause in all relevant track access contracts from CP6 onwards.

Schedule 8 'reopeners' in CP6

9.59 Several responses to the draft determination requested that we give guidance on the approach to Schedule 8 'reopeners' for passenger operators in CP6. However, the reasons for wanting a reopener, and the proposed scope of the reopener, differed between respondents. These can be organised into three different 'types' of recalibration, which are discussed in more detail further below.

---

[74] Appendix C of Implementing PR18: consultation on changes to access contracts, ORR, July 2018, available here.

- Type 1: 'Basic' recalibration: This is a recalibration in response to a material change in circumstances (for instance, a franchise remapping). It applies only to those operators that are directly affected.

- Type 2: Large-scale 'basic' recalibration: This is a recalibration as a result of a change in circumstances that affects all operators or that affects the 'star' model[75]. It would involve recalibrating Schedule 8 for all passenger operators.

- Type 3: 'Forecast uncertainty' recalibration: Several respondents proposed a recalibration to 'correct' the benchmarks during the control period to make them better reflect expected performance.

The mechanism for re-opening Schedule 8

9.60 Existing contractual provisions (paragraph 17 of Schedule 8 of passenger track access contracts) already provide significant scope for 're-opening' the passenger Schedule 8 regime within a control period. Under these provisions:

- either party can propose a recalibration;

- if they agree it comes to us for approval; and

- if they do not agree then either party can refer the matter to us and we can determine whether or not the parameters should be recalibrated.

The basis for within-control period Schedule 8 recalibrations

9.61 We have determined the expected performance levels for Network Rail for CP6, taking into account Network Rail's funding. These are the CRM-P CP6 baseline trajectories set out in chapter 5 of this document.

9.62 The Network Rail benchmarks in the passenger regime have been calibrated so as to align with these expectations of performance. The Schedule 8 recalibration working group selected the evidence and methodology for recalibrating the wider regime[76], on the understanding that this was the best approach to forecasting the level of these parameters for the next control period.

9.63 In common with previous control periods and in light of these facts, our presumption is that the PR18 Schedule 8 recalibration evidence base should serve as the basis for all within-control period recalibrations, in the absence of compelling reasons to do

---

[75] The concept of the 'star' model is explained in our current track access guidance on the performance regime, available here.

[76] Except in those cases where agreement could not be reached; in these circumstances ORR determined which of the options proposed by the working group should be taken forward. More detail on these is available in the charges and incentives decisions document.

things differently. This evidence base includes both the evidence used to set the payment rates and the benchmarks.

'Type 1' recalibrations

9.64 Recalibrations of this sort are prompted by material changes in circumstance and only relate to those operators directly affected by the changes. They are most typically used for franchise re-mappings or new services, of which there may be several during CP6.

9.65 We consider that these sorts of recalibrations are well catered for by existing contractual provisions (i.e. paragraph 17 of Schedule 8).

'Type 2' recalibrations

9.66 Recalibrations of this sort are likewise prompted by material changes in circumstance but the scope of their application may extend to a significant degree beyond those operators directly affected by the changes.

9.67 We consider that recalibrations of this sort are best delivered using existing contractual provisions. That is, we would expect either Network Rail or operators (but preferably both) to bring about such a recalibration by submitting applications for recalibration to us, under paragraph 17 of Schedule 8.

9.68 We are aware of several recalibrations of this sort that may be needed during CP6. Below we set out what we are minded to decide for these recalibrations during CP6 in the event of a dispute between operators and Network Rail as to whether or not they should go ahead.

9.69 First, significant changes to the principles or practice of delay attribution during CP6 (whatever their cause) would lead to a significant reclassification of delay. Any such reclassification could warrant a recalibration to ensure that benchmarks align with the level of expected performance on the basis of the revised approach to delay attribution. In the event of a significant change to the principles or practice of delay attribution during CP6, we would be minded to approve applications (agreed or disputed) for recalibration of affected Schedule 8 parameters that are proportionate and consistent with the principles of Schedule 8.

9.70 Second, significant changes in traffic on the network (for instance, as a result of the addition of Crossrail or GTR services) could cause a material imbalance in the 'star' model, the financial impacts of which Network Rail would be exposed to. In the event of a change in circumstances that leads to a material imbalance in the 'star' model (as we anticipate the addition of Crossrail or GTR services might), we would be minded to approve applications (agreed or disputed) for recalibration of affected Schedule 8 parameters that are proportionate and consistent with the principles of Schedule 8.

'Type 3' recalibrations

9.71 Historically the Schedule 8 regime has only been recalibrated for material changes in circumstances or calculation errors. This ensures that both Network Rail and operators are well incentivised to ensure that the forecasts built into the regime are accurate, as well as avoiding the potential perverse incentives involved in recalibrating the regime if performance turns out to be better or worse than expected.

9.72 There is thus a strong presumption that the PR18 Schedule 8 recalibration evidence base (including the CP6 baseline trajectories for Network Rail) should serve as the basis for all within-control period recalibrations of Schedule 8. However, we are nonetheless willing to consider applications to recalibrate parameters of Schedule 8 to correct for the impact of forecast uncertainty, which would inevitably involve some departure from the PR18 evidence base.

9.73 Reflecting the concerns raised by stakeholders, we have only considered recalibration for forecast uncertainty for benchmarks. For us to be able to approve any such recalibration for benchmarks, applications will need to demonstrate that off-benchmark performance is clearly a consequence of uncertainty in forecasting and not, for instance, a result of good or bad performance, or a result of an acknowledged and nonetheless accepted weakness of the recalibration methodology.

9.74 However, even if we establish that forecast uncertainty does explain the difference between benchmark and outturn performance, we may nonetheless decide not to approve a recalibration, having considered the application in the context of our wider statutory duties. In particular, in deciding whether or not to approve a recalibration, we will take into account the effect it would have on the franchise settlement (in line with our statutory duty to have regard to the Secretary of State's funds).

9.75 It is worth noting that we are minded not to approve any applications that sought to address such forecast uncertainty with retrospective effect.

Schedule 8 guidance

9.76 We will be revising our [guidance on track access applications](#) to reflect the CP6 charging and contractual incentive framework in due course. As part of this, we will update the guidance on Schedule 8 (available [here](#)) to reflect the decisions we have made as part of PR18, including our position on the different types of within-control period recalibrations.

10. Next steps

Overview

This chapter discusses the remaining work to be undertaken following publication of the PR18 final determination and ahead of the start of CP6 (on 1 April 2019).

Introduction

10.1 There is a range of further work required following our final determination, both to implement our decisions and also to prepare for the start of CP6. In chapter 1, we discussed the following:

■ the implementation of our decisions into access contracts and modification of Network Rail's network licence to reflect the outcome of our review of the network licence;

■ the revision to our monitoring and enforcement policy ahead of CP6; and

■ publication of our 'Enhancements in CP6: roles and responsibilities' document.

10.2 There are also several other areas of work that are planned ahead of CP6. These are as follows and are discussed in more detail in this chapter:

■ the publication of Network Rail's delivery plan for CP6;

■ the further work to finalise the details of how the ICCs will work for franchised and open access operators;

■ our guidance on collaborative working;

■ establishing the governance of the PIF; and

■ commencing a review of delay attribution.

10.3 Key milestones following our final determination are set out in Table 1.1 of chapter 1, and our live PR18 timetable is available on our website.

Delivery plan

10.4 By 31 March 2019, Network Rail will publish its delivery plan for CP6, setting out what the company will deliver for its customers and funders over 2019-24. This will have two key functions: to allow stakeholders to plan their businesses with a reasonable degree of assurance; and to provide a transparent baseline against which Network Rail will report progress, helping us to monitor delivery and hold it to account.

10.5 The plan will comprise a suite of documents including:

■ updated versions of the strategic plans (reflecting our final determination) for: each geographic route; the FNPO; the System Operator; and the central support functions. There will also be an overview of the Network Rail business as a whole. Network Rail will then refresh these annually;

■ updated Network Rail scorecards. We expect these to be published quarterly during CP6, with a commentary on progress and any changes (noting it is open to Network Rail to make alternative proposals as the monitoring and reporting arrangements take shape through CP6, as discussed in chapter 5); and

■ supporting material made available to ORR through the determination process, such as the asset management capability short-form strategies, activity based planning data books and annual stakeholder reports. This material will be updated in line with Network Rail's business planning process throughout CP6.

10.6 Together, these documents will detail:

■ Network Rail's planned activities to deliver the requirements set out in the final determination;

■ the measures we require Network Rail to forecast (to indicate planned performance); and

■ the level of disaggregation at which it should report progress against these forecasts.

10.7 The delivery plan will also include Network Rail's revised financial forecasts. It should also include our CP6 baseline trajectories.

10.8 Network Rail has committed to continuous, proactive engagement with its stakeholders to develop and shape its strategic plans and customer scorecards (in the CP6 delivery plan and in its plans throughout CP6). This includes discussing its proposals with industry bodies, including the Rail Delivery Group.

10.9 Further details on our requirements for the delivery plan are set out in our [delivery plan notice](#).

Infrastructure cost charges next steps

Franchised passenger operators

10.10 The annual adjustment to franchised passenger operators' ICCs (FTACs) for variations in timetabled traffic requires timetabled traffic baselines to be set for each franchised passenger operator.

10.11 In discussions following our consultation on the draft determination, Network Rail proposed using timetabled train miles from its Schedule 4 Compensation System (S4CS) for a base year, either 2018-19 or 2019-20, and applying its traffic growth forecasts for each year of CP6.

10.12 Due to the issues with the implementation of the May 2018 timetable, using 2018-19 as the base year risks setting baselines that overstate each franchised operators' expected timetabled traffic in CP6. As a result, Network Rail's preferred option is to use 2019-20 as the base year to reduce the financial risk to Network Rail and operators.

10.13 If 2019-20 is used as the base year, the process for developing the timetable means the baselines will not be set before the start of CP6. Instead, they would likely be set in July 2019. We recognise this may have some impact on the incentives that the annual adjustment provides to Network Rail and operators to add traffic to the network in the first year of the control period. However, as it would minimise the risk of setting unrealistic timetabled traffic baselines, we currently consider using 2019-20 to be the more appropriate base year to use.

10.14 We are continuing to work with Network Rail on the approach for setting timetabled traffic baselines. When we have been assured Network Rail's proposed approach is robust and we have confirmed which base year will be used, franchised passenger operators will be consulted on their timetabled traffic baselines for CP6.

10.15 The exact timing of this consultation is still to be confirmed, however, if Network Rail's proposed approach is proven robust and 2019-20 is used as the base year we expect it to be in spring 2019.

Consultation on ICC implementation for open access services

10.16 In response to the draft determination, many stakeholders asked for more information about how ICCs would be levied on open access services. We continue to expect to consult on implementation issues for levying an ICC on new interurban open access services towards the end of 2018, and to conclude in early 2019 (before CP6 begins).

10.17 This consultation will cover the following issues on which we need to conclude before the beginning of CP6:

- the definition of interurban open access services;

- the definition of what characterises a significant variation to an existing service;

- changes to the access policy including amendments to the NPA test; and

- guidance on the economic equilibrium test.

10.18 We are considering the points made by respondents to the draft determination as we develop our policy on these issues. This will also meet the relevant legal requirements, not least those relating to undue discrimination and the outcomes from any relevant case law. We will continue to consult both formally and informally with industry throughout this process.

Collaborative working guidance

10.19 As discussed in chapter 3, responses to our November 2017 working paper on collaborative working, supplemented by our further engagement with operators, has confirmed that a significant amount of collaborative working between Network Rail and operators already takes place. However, we have identified some perceived barriers to industry building on existing collaboration and achieving even greater benefits. These apply in particular to collaboration aimed at allowing Network Rail to deliver more efficiently and where the parties wish to share the cost savings achieved.

10.20 Reflecting this feedback, and with the goal of overcoming these barriers, we will publish guidance setting out our views on what commercial arrangements are likely to be permitted. We will aim to publish the guidance by 31 March 2019.

Performance innovation fund (PIF)

10.21 We set out in chapter 3 that we would establish a GB-wide performance innovation fund. The purpose of the fund will be to support innovative projects aimed at driving improvements in performance that would otherwise fail to achieve funding due to coordination/free-rider problems, or because their benefits are uncertain or distant.

10.22 We will work with Network Rail and wider industry over the coming months to design the PIF. This will include matters such as:

■ setting out more detailed criteria for what type of projects can be funded by the PIF;

■ establishing how the PIF will be governed; and

■ setting expectations for how knowledge gained through projects funded by the PIF should be captured and disseminated across the industry.

Review of delay attribution

10.23 In the December 2016 PR18 charges and incentives consultation we proposed to change the measure of passenger operator performance in Schedule 8 from one based on the amount of delay that a passenger operator causes to themselves to one based on the amount of delay that they cause to other operators.

10.24 Responses to that consultation brought to light concerns that the current approach to delay attribution would make it difficult to realise the incentive benefits of such a change to the operation of Schedule 8.

10.25 In June 2017, we published the conclusions to the consultation, including our decision not to pursue the proposed changes to Schedule 8 in PR18. In the context of that decision we noted that:

> "addressing the flaws in delay attribution on the network should be a priority for industry; as well as inhibiting accurate incentives, the existing system is both too costly and inaccurate. For that reason we will be adding a programme of work to our forward plan to ensure that the system for delay attribution is improved and that reforms can start as soon as PR18 decisions are taken."

10.26 We shared a draft remit for this work with the Delay Attribution Board in early 2018, and explained that work on this review – including seeking views on the appropriate scope – will commence after the PR18 final determination is published. Reflecting this, we propose to begin work on this review in earnest in 2019. In particular:

- in early 2019 we will consult on issues and areas for improvement in delay attribution, including a workshop to facilitate industry responses;

- following this consultation we will categorise and prioritise areas for review; and

- we will look to assemble a working group of representatives from across industry to lead the development, assessment and, ultimately, implementation of options.

10.27 The scope of the review is limited to reviewing the structure, process and rules for delay attribution. We are not starting with limits on the changes to those that are in scope, so, for instance, the review may consider options that make delay attribution independent of Network Rail.

10.28 Specific to how delay is attributed, our particular concerns relate to (a) the attribution of delay when one party (e.g. Network Rail or operator) exacerbates the impacts of a delay caused by another party; and (b) differences in the way that primary and reactionary delay are classified between Network Rail and operators. More generally, we are keen to promote greater alignment between the Delay Attribution Principles and Rules and the principles for delay attribution set out in Schedule 8, and to ensure that the delay attribution is not more costly or time-consuming than necessary.

10.29 However, reforms to the functioning of Schedule 8 are outside the scope of this review. Changes to Schedule 8 are only practical to implement through the periodic review process, which is expected to be separate from this review.

10.30 Moreover, Schedule 8 performs an important role on the network by providing financial incentives to operators and Network Rail to limit the delay that they cause. Since it is important that both operators and Network Rail have some financial incentives to limit the delay they cause, the review of delay attribution should consider options that are possible within the scope of the CP6 Schedule 8 framework.

Remaining milestones

10.31 The key forthcoming milestones for PR18, up to the commencement of CP6, are included in the PR18 timetable.

Appendix A: Network Rail structure

Figure A.1: Overview of Network Rail's routes and key central functions

The eight geographic routes

The geographic routes are responsible for operating, maintaining and renewing their respective areas of the network.

In CP6, each route will have its own regulatory settlement. This means that the routes will each have their own set of expectations for delivery in CP6, along with their own allocated funding. We will then hold the routes to account for delivering their settlements in CP6.

As set out below, the FNPO and the System Operator will also have their own regulatory settlements that we will hold them to account for delivering.

Freight & National Passenger Operator (FNPO)

The FNPO route does not directly manage assets or control train operations. As a 'virtual' route it delivers outputs for its customers by working with and through the geographic routes, the SO and other parts of Network Rail.

In CP6, the FNPO will have its own regulatory settlement.

System Operator (the SO)

The SO function leads strategic planning, manages changes to the network, produces the timetable and manages the sale of access rights process.

In CP6, the SO will have its own regulatory settlement.

Central functions

As well as the SO, Network Rail's central functions also include a number of directorates, including:

- **Safety, Technical & Engineering**: is the Technical Authority for Network Rail. It provides assurance and supports the safe, reliable and effective functioning of infrastructure assets by the routes.

- **Route Services Directorate**: provides services to the routes where there are benefits from optimising resources at a national level and economies of scale.

- **Infrastructure Projects**: is the national infrastructure delivery division of Network Rail and is currently responsible for the delivery of all major infrastructure delivery works.

- **Digital Railway**: is Network Rail's cross-industry programme to introduce new digital signalling and train control systems with fewer trackside assets.

Aside from the SO, the central functions do not have their own regulatory settlements. Their costs are ultimately paid by the routes and the SO.