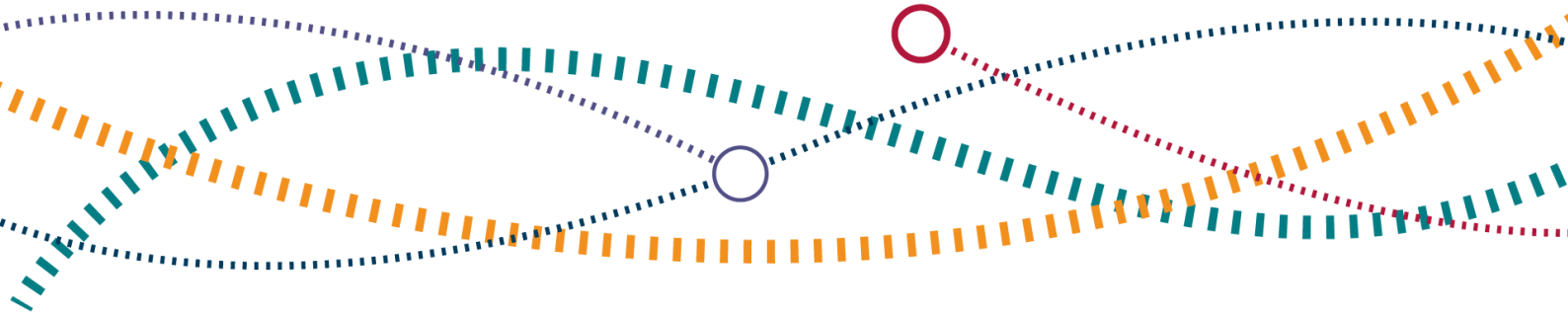
OFFICE OF RAIL AND ROAD

Annual efficiency and finance assessment of Network Rail 2019-20

28 July 2020



Contents

Summary

Purpose of this document

Network Rail spent around £11bn operating, maintaining and renewing the national rail infrastructure in the year ended 31 March 2020 (2019-20), the first year of Control Period 6 (CP6)[1]. This document explains our assessment of Network Rail's efficiency and wider financial performance in the year, providing detailed support to our recent Network Rail annual assessment[2]. It covers Network Rail's activities across Great Britain as a whole and separately for Scotland, and each of its regions in England and Wales.

Key findings

The key findings from our assessment are:

1) Improved financial performance mostly due to efficiency savings

Network Rail outperformed its planned income and expenditure[3] by £20m in 2019-20. This represents a substantial improvement in the company's financial performance compared to recent years.

Network Rail's financial outperformance was mostly due to exceeding its planned efficiency savings on operations, maintenance, renewals and support activities (£385m, instead of the £316m expected savings) and improved train performance, partly offset by enhancements underperformance. As examined in this report, Network Rail has achieved efficiency savings across a range of its core business activities, including improved contracting strategies, reduced activity on renewals due to new technologies and improved workbank planning.

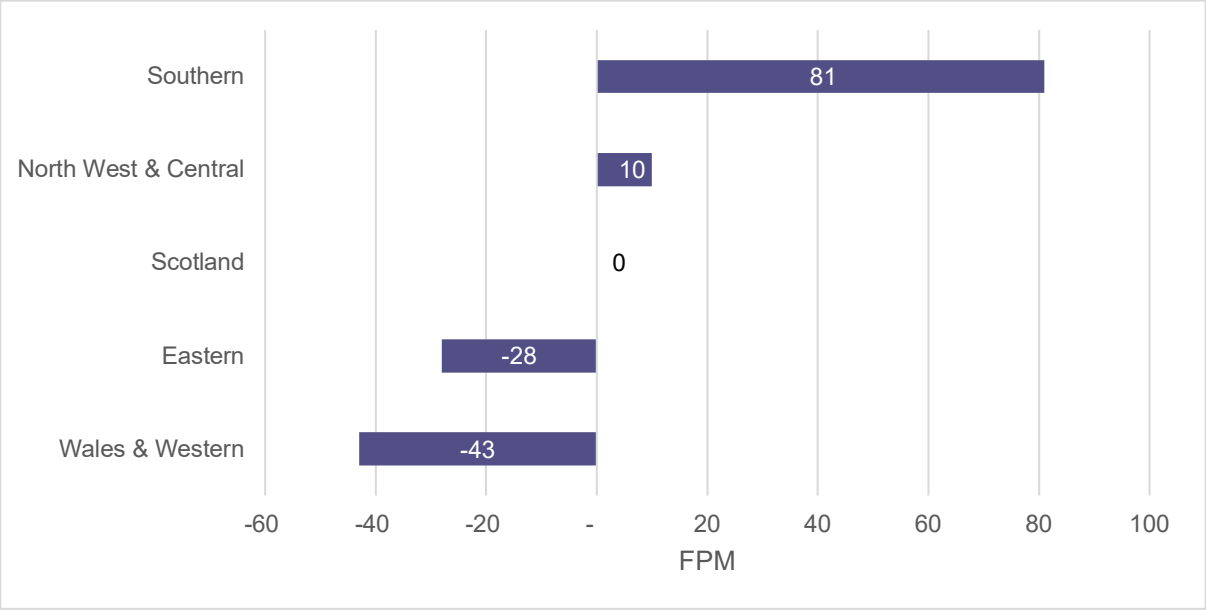
Southern region had the best financial performance (£81m outperformance). Wales & Western, and Eastern both underperformed (by £43m and £28m respectively). There are some common drivers of income and expenditure across the network. However, local circumstances (such as weather) and different levels of regional performance (such as local efficiency initiatives) can have an effect. For example, Eastern and Wales & Western's underperformance was mostly due to cost increases on Crossrail, with Wales & Western further impacted by cost increases on the Great Western Electrification Programme (GWEP).

[1] Network Rail's funding and requirements for CP6 were set out in our 2018 periodic review (PR18). This determined what Network Rail should deliver in respect of operating, maintaining and renewing its network, and the funding needed. CP6 runs from 1 April 2019 to 31 March 2024. See http://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/price-controls/periodic-review-2018 for further details.

[2] See https://orr.gov.uk/rail/publications/economic-regulation-publications/annual-assessment-of-network-rail-2019-20.

[3] Network Rail established a CP6 delivery plan (business plan) to deliver the requirements of our PR18 determination. Network Rail's CP6 delivery plan included detailed financial assumptions for its income and expenditure in 2019-20. These are summarised in Annex A.

Figure 1: Regional contributions to Network Rail's financial performance on income and expenditure in 2019-20



Source: Network Rail data

2) Improved reporting on changes to costs and efficiency

We have required improvements to the way in which Network Rail reports on changes to its costs in CP6[4]. We can now see more clearly and in much more detail how efficiency savings are being planned and delivered. Network Rail has worked constructively with us over the past 18 months to implement this new approach.

There is inherent uncertainty in the value of some of the efficiency savings that Network Rail made in 2019-20. Network Rail has calculated an efficiency saving of £385m in 2019-20 with a range of uncertainty from £338m to £434m. Based on our own assurance work, we agree with Network Rail's reported efficiency.

We will continue to work with Network Rail on the measurement and reporting of more complex efficiencies and other related matters over the coming year.

3) Improved CP6 efficiency planning though more needs to be done

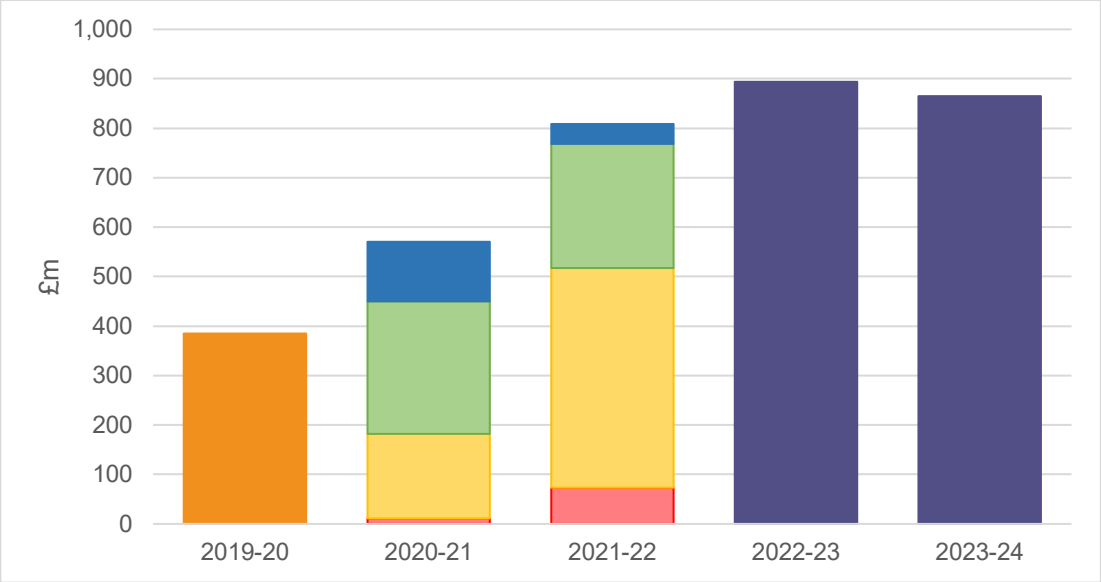
There can be no let-up in Network Rail's focus on delivering the £3.5bn of efficiency improvements that it has committed to deliver in CP6, especially given the increases needed in years 3 and 4. We have previously reported our concerns about the different levels of maturity and uncertainty in routes' CP6 efficiency plans. In response to these concerns, Network Rail

[4] These are set out in our CP6 regulatory accounting guidelines, see link here https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/network-licence/regulatory-accounts.

developed an efficiency improvement plan and agreed to support an independent reporter review of routes' renewals and efficiency plans. We reported on this in December 2019[5].

Network Rail has made significant progress addressing previous concerns. However, we consider that more still needs to be done in renewals, where plans are generally less mature. These are critical to delivering the £3.5bn of total efficiency improvements that Network Rail has committed to deliver in CP6. Over the coming year we will continue our work reviewing Network Rail's CP6 efficiency planning.

Figure 2: Network Rail's CP6 efficiency trajectory



Key: *Year 1*: delivered, *Years 2 and 3*: Blue - projects delivered and waiting for benefits to materialise; Green - business confident in delivery (projects with delivery dates and milestones); Yellow - Plans in place but lower confidence in delivery; and Red - Commitment to deliver, but no strategic theme assigned, *Years 4 and 5*: trajectory.

Source: ORR analysis of Network Rail data

4) Lower enhancements expenditure

Network Rail spent £1.8bn on enhancements to its network in 2019-20. This represents a 43 percent reduction in expenditure compared to last year. This was mostly due to a tail off in large control period 5 (CP5) projects. Network Rail expects to spend around £11bn on enhancements to its network in CP6. However, this is subject to approvals from the Department for Transport (DfT) and Transport Scotland under their 'pipeline' approaches for releasing funds as individual projects progress.

Enhancements was the only area of significant financial underperformance by Network Rail in 2019-20, with £86m of overspend (underperformance) on the work that was undertaken. The underperformance is nearly all associated with the close out of two major CP5 projects: Crossrail

[5] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment.

and GWEP. Anticipated total costs for these projects have increased due to delays and on-going cost disputes with contractors.

5) Forward look including the impact of Covid-19 on Network Rail's finances

Covid-19 is currently having a significant impact on the economy and the railways are no exception. Passenger numbers have fallen and new ways are being developed to enable passengers and railway workers to go about their business safely. This is a complex issue which we examined in our recent Network Rail annual assessment.

Most of the lockdown measures did not come into effect until March 2020, so Covid-19 had little effect on Network Rail's financial performance in 2019-20.

Looking forward to 2020-21 and CP6 as a whole, we expect Covid-19 to affect some of Network Rail's income, such as retail income from its managed stations. However, these sources of income are relatively small compared to government grants (from DfT and Transport Scotland) and fixed track access income, which should not be affected significantly. The engineering activities of maintaining, renewing and enhancing the rail network have been partially disrupted since the lockdown restrictions were introduced separately in England, Scotland and Wales. We do not anticipate that engineering activities should be impacted significantly by Covid-19 across CP6 as a whole, with the possible exception of planned high output work.

As examined in this report, Network Rail's regions have reasonably developed plans for efficient delivery in 2020-21 and they are making progress with their plans for 2021-22. However, there are areas for improvement. At the start of 2020-21, for Great Britain, 69 percent of renewals projects (by value) had completed detailed designs and received financial authorisation for delivery in 2020-21, behind Network Rail's internal 83 percent target. 76 percent of forecast disruptive access to the network in 2020-21 has been booked. This was behind Network Rail's internal 93 percent target. These present a risk to efficient delivery of renewals and we will continue to monitor these issues closely.

6) Budget flexibility

Network Rail, like all public bodies, is subject to financial controls concerning the transfer of funding between years. Owing to the nature of its business, it does, however, have a financial flexibility agreement in place with HM Treasury, which enables it to carry forward some underspend to future years of CP6, subject to HM Treasury approval[6]. Network Rail has received HM Treasury approval to roll forward £480m of capital expenditure to be used later in CP6 and has submitted a request to HM Treasury to carry forward a further £96m of capital underspends from 2019-20 into later years of CP6.

Transport Scotland oversees the flexibility of Scotland grant payments and for 2019-20 it allowed a partial carry forward of grant funding to be spent later in CP6.

[6] The budget flexibility rules are explained in our financial framework PR18 document https://orr.gov.uk/__data/assets/pdf_file/0004/39307/pr18-final-determination-financial-framework.pdf.

7) Transfer of the Core Valley Lines to the Welsh Government

Part of the rail network in Wales (the Core Valley Lines, CVL) was transferred to the Welsh Government in March 2020. Transport for Wales owns the CVL, which Amey Keolis Infrastructure manages on its behalf. The transfer resulted in £470m of property sales income and an equal and offsetting £470m deduction from Network Rail's regulatory asset base (RAB). It also changes Network Rail's financial settlement for the remainder of CP6 as it will not need as much funding for Wales.

1. Introduction

Introduction and structure of this report

1.1 Our annual efficiency and finance assessments provide a snapshot of how Network Rail is performing financially at the end of each year. This 2020 publication covers the first year of control period 6 (CP6), April 2019 to March 2020 (2019-20). It provides detailed support for our recent Network Rail annual assessment, which also covers Network Rail's operational performance, including in respect of safety risk, train performance and asset management[7].

1.2 Most of the financial information in this report is based on Network Rail's regulatory financial statements. These are available on Network Rail's website[8]. Financial information in this document is presented in 2019-20 prices except where stated. Numbers may not sum due to rounding.

1.3 Chapter 2 reports on Network Rail's efficiency and wider financial performance, on its income and expenditure and related matters such as budgetary flexibility for the company as a whole.

1.4 Chapter 3 provides an analysis of the financial performance of each of the company's five regions (Scotland, Southern, Wales & Western, Eastern, and North West & Central) and for its national functions. We also provide a separate analysis for Wales (including the transfer of the Core Valley Lines (CVL) to the Welsh Government).

1.5 Annex A provides detailed financial tables for Network Rail's activities in Great Britain, separately for regions and national functions, and for England & Wales and Wales. Annex B explains the linkage between the efficiency and financial performance measures used in our assessments. Annex C explains our review of Network Rail's efficiency improvements. Annex D summarises the progress of Network Rail's CP6 research and development (R&D) projects.

1.6 We used cost benchmarking of Network Rail's routes to inform our 2018 periodic review (PR18) analysis of Network Rail's proposed maintenance and renewals costs in CP6[9]. Alongside this report we are also publishing an update of our PR18 analysis[10].

[7] See https://orr.gov.uk/rail/publications/economic-regulation-publications/annual-assessment-of-network-rail-2019-20. We also publish a more detailed annual health and safety report. See http://orr.gov.uk/rail/health-and-safety/annual-health-and-safety-report.

[8] https://www.networkrail.co.uk/who-we-are/publications-and-resources/financial/

[9] See https://orr.gov.uk/__data/assets/pdf_file/0018/39312/pr18-final-determination-review-of-network-rails-proposed-costs.pdf.

[10] Our updated analysis is available at https://orr.gov.uk/__data/assets/pdf_file/0003/43167/cost-benchmarking-of-network-rail-annual-report-year-1-of-cp6.pdf.

How we calculate Network Rail's efficiency and financial performance

1.7 Different measures can be used to report on a company's financial performance and there is no single right or wrong measure. Different measures are not exclusive and can be complimentary to provide a more rounded assessment. We consulted on these matters in the development of our PR18 determination and our CP6 regulatory accounting guidelines[11].

1.8 Our CP6 regulatory accounting guidelines explain how Network Rail is required to report to us in CP6. Our assessments in CP6 focus on two measures:

- Efficiency: This compares the relationship between expenditure on core business activities (operations, support functions, maintenance and renewals) and outputs on a like-for-like basis over time.
- Financial performance: This compares income and expenditure to the financial assumptions underpinning regions' CP6 funding[12]. The financial assumptions in the delivery plan include the efficiency improvements that Network Rail's regions are expected to achieve in CP6. As such, these baselines are described as being post-efficient. If a region has spent less and / or has received more income than the delivery plan (for what it has delivered), it will report financial outperformance, and vice versa.

1.9 Reporting of efficiency and financial performance over time gives assurance to rail users and funders that Network Rail's regions are delivering what is expected and, at the same time, provides a reputational incentive for them to become more efficient.

Efficiency

1.10 The priorities for our assessments, and hence for Network Rail's reporting in CP6, are to:

- drive the best outcomes for the users of the rail network through supporting better value for money;
- enhance comparisons of the performance of regions to assist in benchmarking;
- move away from measures that aim to be technically precise to a more rounded assessment which draws out key messages about the drivers of performance, makes a clearer link between expenditure and delivery, and examines how efficiencies are being achieved;
- make better informed forward-looking assessments of the efficiencies that regions will likely deliver across the control period; and

[11] See http://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/network-licence/regulatory-accounts.

[12] It also applies for Network Rail as a whole, and separately for Scotland, and for England & Wales.

- provide clear and informative messages about efficiency improvements, recognising that different audiences want different levels of technical detail.

1.11 To deliver these priorities we required changes to Network Rail's reporting in CP6, including:

- greater emphasis on reporting of how regions have delivered efficiency improvements;
- more assessment of cost drivers and productivity measures over time and across regions; and
- a forward-looking view of the efficiencies that Network Rail will likely achieve across CP6. This includes reporting on the progress of regions' efficiency plans and leading indicators of delivery.

Financial performance

1.12 Network Rail's financial performance can be calculated in several ways. The factors to be considered when deciding how to carry out this calculation include:

- what baselines (or budget) we should compare to;
- adjusting for the amount of work undertaken; and
- including or excluding some types of income and expenditure that may be less controllable such as the income and expenditure associated with traction electricity.

1.13 To be as informative as possible, our primary measure of Network Rail's financial performance, the financial performance measure (FPM) takes each of the above matters into account. FPM compares Network Rail's income and expenditure to its CP6 delivery plan[13]. It adjusts for the amount of work done and excludes income and expenditure that is not controllable. Our CP6 regulatory accounting guidelines explain how FPM is calculated.

1.14 Efficiency and financial performance are related but not the same. The relationship between these measures is explained in Annex B.

Regional level financial analysis

1.15 Network Rail started control period 5 (CP5) with 10 regional operating routes which were subsequently rationalised to eight. Since the start of CP6, Network Rail has again reorganised these routes. Network Rail now has five geographical regions (Scotland, Southern, Wales & Western, Eastern, and North West & Central), together with some

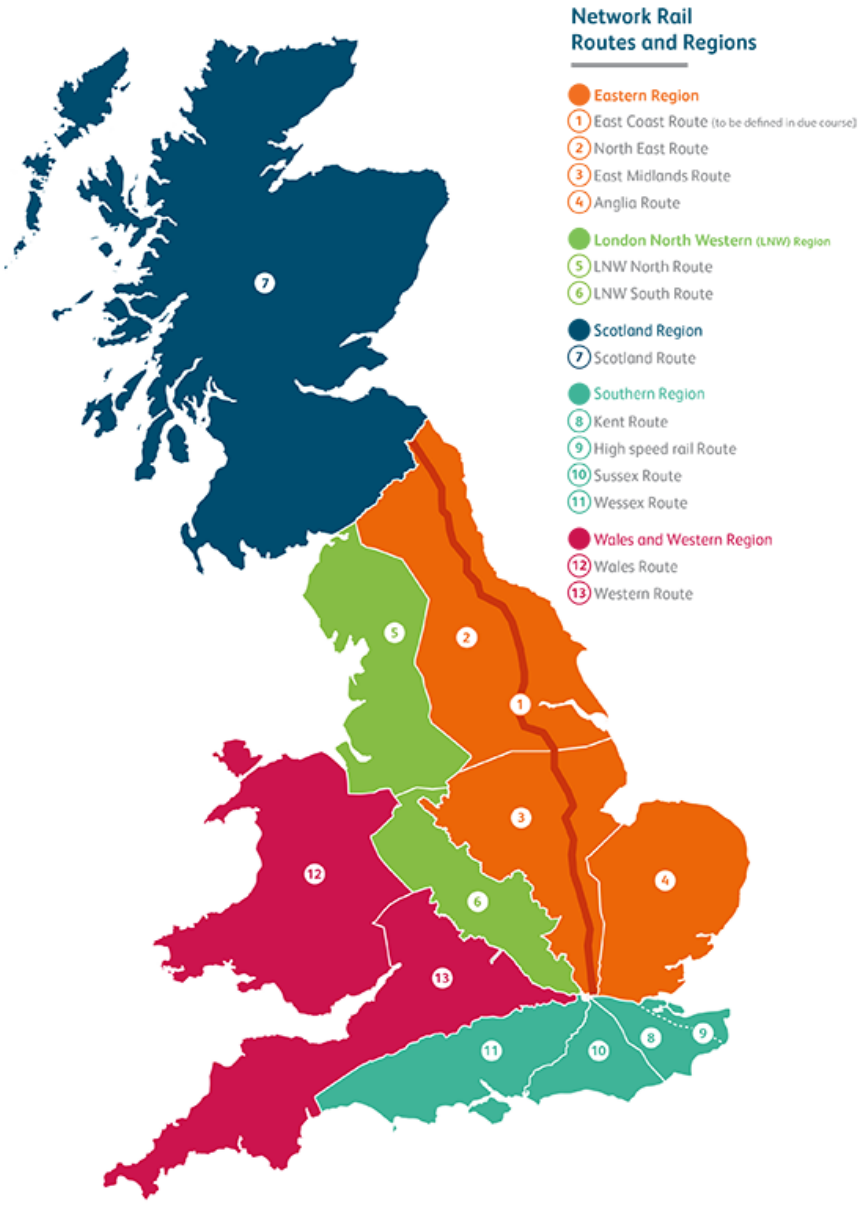
[13] It excludes some income and expenditure that is not as controllable by Network Rail. This includes network grant, fixed track access charges, traction electricity income and costs, and business rates.

national functions. Network Rail still has routes, although there are now 14 of them. The routes are now a sub-geography of the five regions[14].

1.16 The reorganisation from routes to regions makes it difficult to compare performance back to our PR18 determination, since that was undertaken for routes. Network Rail developed a CP6 delivery plan which set out how it intended to deliver the requirements of our PR18 determination within the funding available. It has subsequently revised this delivery plan from being route-based to regional-based. So, for the purpose of comparing Network Rail's financial performance to our PR18 funding assumptions, we use Network Rail's revised CP6 delivery plan as the funding baselines in this assessment.

1.17 A map of Network Rail's five regions is shown in Figure 1.1.

Figure 1.1 The geography of Network Rail's regions as at 31 March 2020



Source: Network Rail

[14] See https://www.networkrail.co.uk/who-we-are/putting-passengers-first/.

1.18 We welcome comments on the content of this report. These should be sent to:

Customer Correspondence Team
Office of Rail and Road
25 Cabot Square
London E14 4QZ
Email: contact.cct@orr.gov.uk

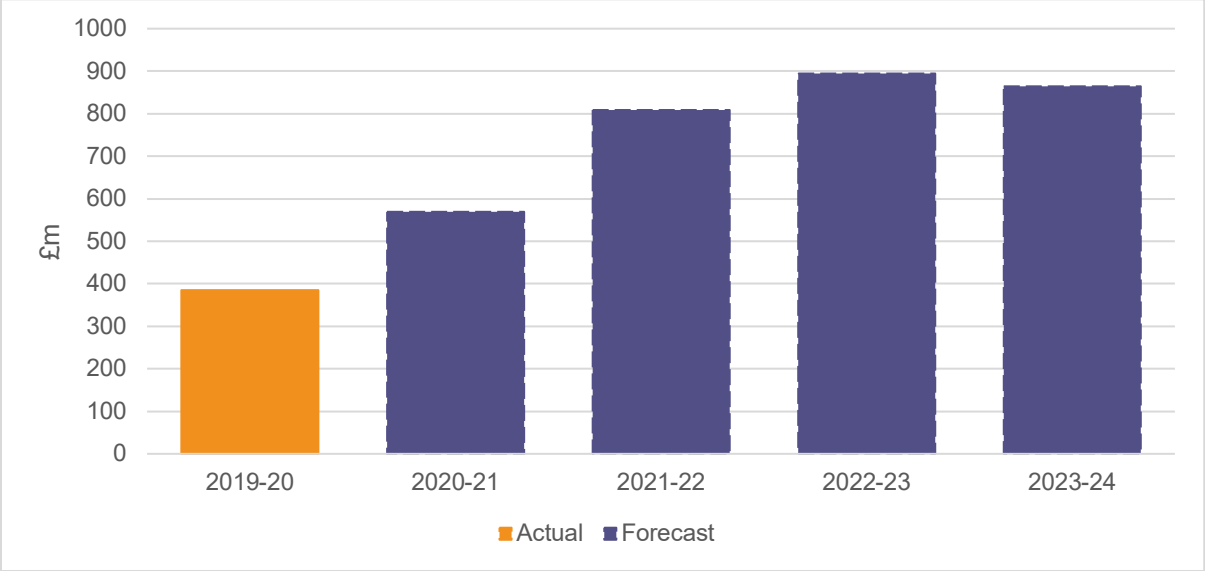
2. Efficiency and financial performance

Efficiency

2.1 In determining the funding that Network Rail would require to deliver its required outputs in CP6, we made an assessment of the efficient level of expenditure that it should require[15]. Our PR18 determination concluded that Network Rail should make £3.5bn of efficiency improvements in CP6.

2.2 Network Rail responded to our PR18 determination by developing a CP6 delivery plan which included our £3.5bn of required efficiency improvements. Network Rail's current five-year efficiency trajectory is shown in Figure 2.1.

Figure 2.1 Network Rail's actual and forecast efficiency in CP6, Great Britain



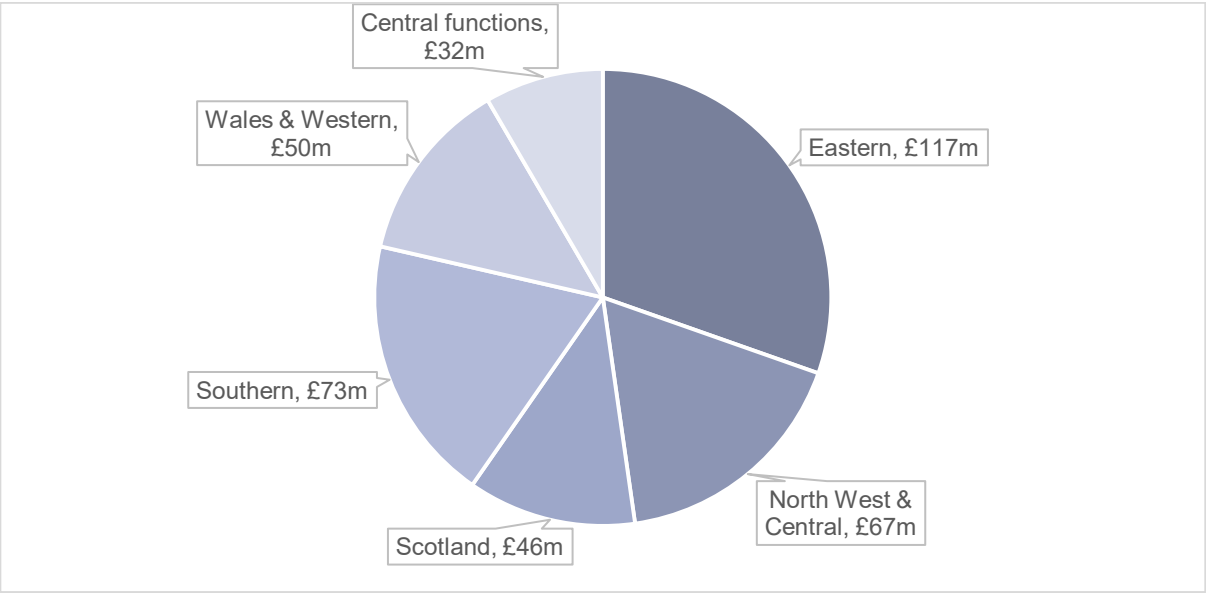
Source: Network Rail and ORR analysis

2.3 Network Rail has reported £385m of efficiency improvement in 2019-20. This was £69m ahead of its delivery plan target of £316m for the year. Figure 2.2 shows regions' and national functions' contributions[16]. These are examined in Chapter 3.

[15] The detailed assumptions underlying these projections were set out in our 2013 periodic review (PR13) final determination. See http://orr.gov.uk/__data/assets/pdf_file/0015/456/fd-chapters-3-11.pdf.

[16] Central function contribution is shown net of central overlay used to adjust for uncertainty in regional estimates.

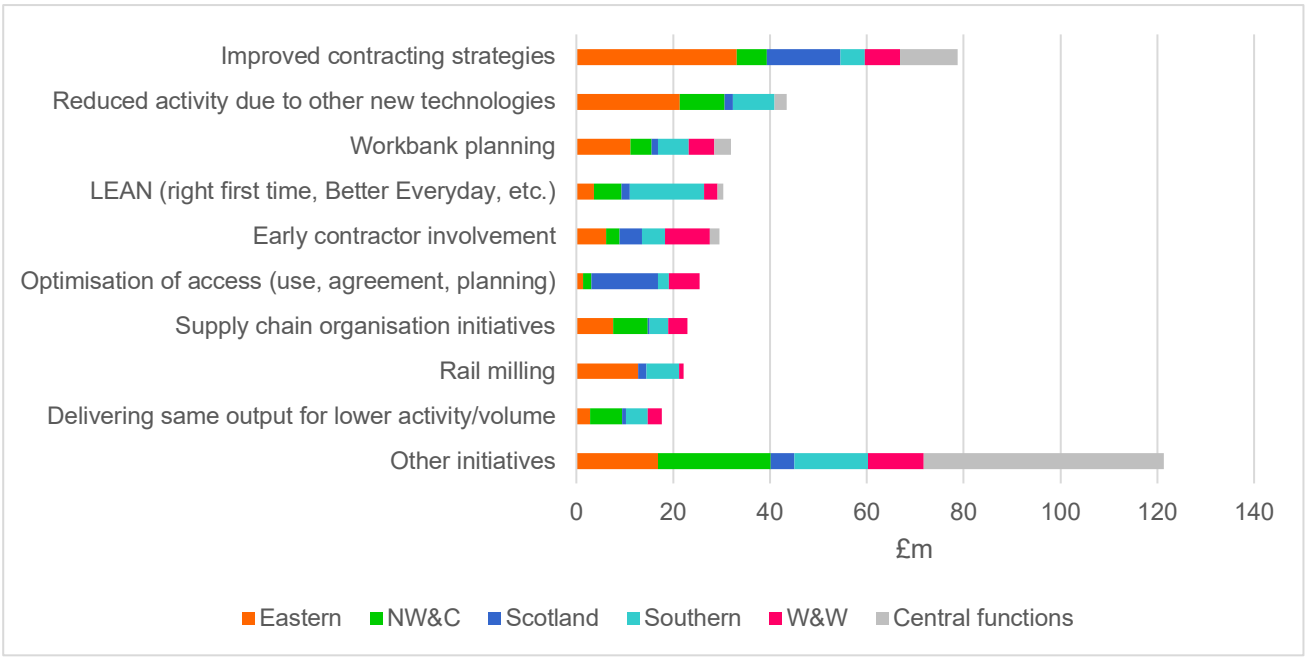
Figure 2.2 Regional contributions to Network Rail's improved efficiency



Source: Network Rail and ORR analysis

2.4 Network Rail's improved efficiency in 2019-20 has been achieved through a combination of national, regional, and local initiatives. Network Rail aggregates these into nine groups and 22 sub-groups in its reporting to us. The contribution of these to Network Rail's efficiency improvement in 2019-20 is shown in Figure 2.3.

Figure 2.3 Initiatives that have contributed to Network Rail's improved efficiency



Source: Network Rail and ORR analysis

2.5 The biggest efficiencies that Network Rail has delivered in 2019-20 and is aiming to deliver in CP6 are in the following areas:

1. *Improved contracting strategies*

   Improved contracting strategies includes negotiating contracts with improved terms/rates. This includes numerous contracts across various types of work and regions, mostly based on new CP6 framework agreements. Network Rail has delivered efficiencies through earlier engagement and getting frameworks in place ready for the start of CP6.

2. *Reduced activity due to other new technologies*

   The introduction of new technologies can reduce the level of renewals required to maintain the condition of assets. This efficiency category includes various projects across the regions that have enabled reduced scope of work whilst maintaining asset condition. These include using new technologies designed to improve automation, accuracy, performance and decision-making.

3. *Improved workbank planning*

   Improved workbank planning is about ensuring that works which have been planned can be completed without unexpected disruption. This includes providing the supply chain with predictable work banks to improve resource planning, leading to improved unit rates.

4. *LEAN / 'Better Everyday'*

   LEAN/'Better Everyday' is a programme to improve the ways that Network Rail delivers work. It is based on lean thinking, a well-known business improvement philosophy that is commonly used within the manufacturing sector. Network Rail is aiming to create a culture of continuous improvement through training and knowledge sharing and has set up a number of regional LEAN academies to support this. Resulting efficiencies have been delivered through various small projects including changes in materials/plant used to achieve the same outputs, improving stock management and organisational changes to reduce journey times to sites.

5. *Optimisation of access*

   Optimisation of access involves improving the access window available to undertake engineering work. This includes working more closely with train operators to agree the right access window for the work required and ensuring that as many possessions as possible are multi-disciplined.

Do we agree with Network Rail's reported efficiency?

2.6 As explained in Chapter 1, we have required substantial changes to Network Rail's reporting of efficiency in CP6. An important change was to require Network Rail to report to us on how efficiency improvements are being delivered. Network Rail has worked constructively with us over the past 18 months to implement this new approach.

2.7 The value of some of Network Rail's efficiency improvements is relatively straightforward to calculate, for example, where there has been a simple reduction in the unit rate of a supplier contract. So, where Network Rail has demonstrated that it has used the new

contract, there is little uncertainty about the value of the efficiency that has been achieved. However, for many business changes that have been implemented to improve efficiency, the value of the efficiency is harder to measure. This results in an inherent uncertainty in the value of the efficiency that has been achieved. Recognising this uncertainty, Network Rail has calculated a central point efficiency of £385m in 2019-20, with a range from £338m to £434m,

2.8 We have worked closely with Network Rail over the past year to agree how efficiencies should be calculated and reported. We consider that Network Rail's reported efficiency may be too conservative, meaning that actual efficiency may be higher than Network Rail has reported. This is because we have found activities where the business considers that it is difficult to prove that an improvement can be directly attributed to a particular business change. For example, electrical safety improvements enable faster isolation of trackside electrical power. This allows longer time on tools for the same length of track possession, enabling more work to be done with the same resource. However, it is difficult to show that any increase in the amount of work undertaken in an individual possession is the direct result of improved electrical safety rather than other factors such as site conditions. We will continue to work with Network Rail over the next year on the valuation and validation of more complex efficiency initiatives.

2.9 Annex C explains the programme of work that we have undertaken to gain assurance that Network Rail's efficiency reporting is robust.

Financial performance

2.10 Our primary measure of Network Rail's financial performance, the financial performance measure (FPM), provides a better understanding of Network Rail's financial performance than simple income and expenditure variances and complements the efficiency analysis (see Annex B for how the two can be reconciled). A positive FPM means that Network Rail has outperformed and vice versa.

Table 2.1 Network Rail's financial performance in 2019-20, Great Britain

£m, 2019-20 prices	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Network grant income	5,260	(627)	-
Franchised track access charges	2,577	(63)	2
Other single till income	1,144	491	15
Total income	**8,981**	**(199)**	**17**
Schedule 4	303	12	25
Schedule 8	57	37	37
Network operations	657	8	5
Support	662	211	97
Traction electricity, industry costs & rates	798	59	2
Maintenance	1,737	(23)	(43)
Total operating expenditure	***4,214***	***304***	***123***
Capex – Renewals	2,908	56	(34)
Capex – Enhancements	1,824	81	(86)
Total capital expenditure	***4,732***	***137***	***(120)***
Financing costs & other[17]	2,105	173	-
Total expenditure	**11,051**	**614**	**3**
Financial performance measure (FPM)			**20**

Source: Network Rail's regulatory financial statements

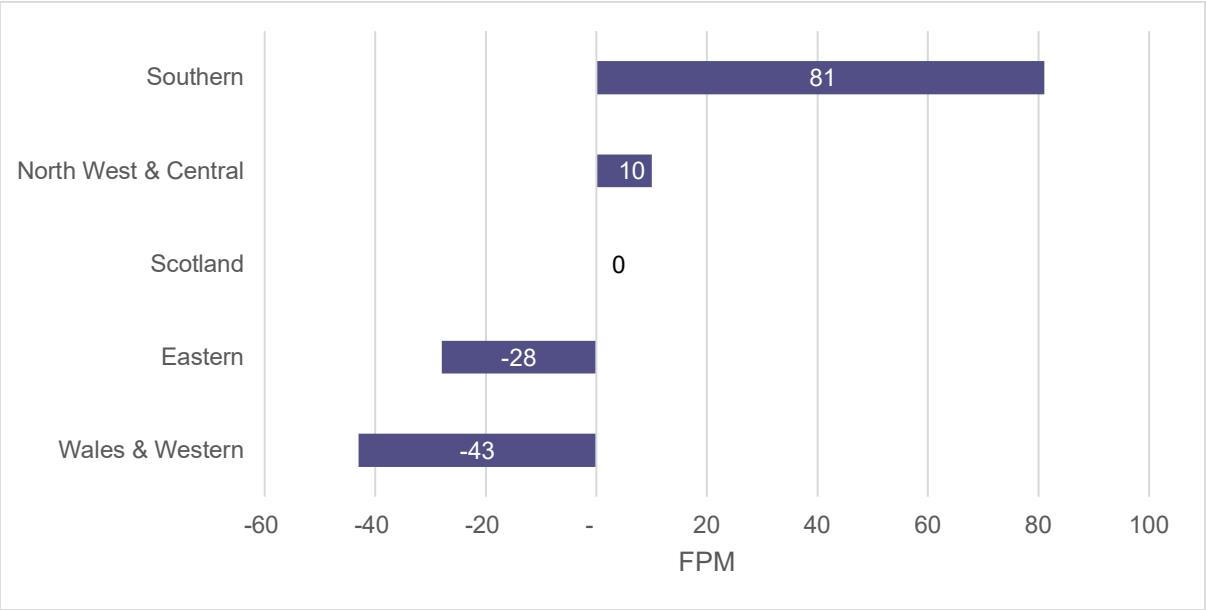
2.11 Network Rail financially outperformed against its CP6 delivery plan by £20m in 2019-20. This represents a substantial improvement compared to its financial performance in CP5 where the company underperformed in each year and by a cumulative £10.1 billion[18] compared to the financial assumptions in our PR13 determination.

2.12 As shown in Table 2.1, Network Rail's financial outperformance was mostly achieved through improved operating expenditure. The only substantial area of financial underperformance was expenditure on enhancements. These matters are examined in the income and expenditure sections of this chapter and in our regional analysis in Chapter 3. There are some common drivers of income and expenditure across the network. However, local circumstances (such as weather) and different levels of regional performance (such as local efficiency initiatives) can have an effect. Better understanding and learning from regional comparisons can help all regions to improve their financial performance.

[17] Network Rail still has financing costs despite being reclassified to the public sector because it has legacy private sector debt. This is funded by DfT outside of the PR18 determination.

[18] 2018-19 price base.

Figure 2.4 Regional contributions to Network Rail's financial performance in 2019-20



Source: ORR analysis of Network Rail's regulatory financial statements

Budget flexibility

2.13 Network Rail was reclassified as an arm's length public sector body in CP5. From the start of CP6, Network Rail is now subject to Government's resource and capital departmental expenditure limits ('RDEL' and 'CDEL'). These restrict Network Rail's ability to spend money in different years of a control period than initially agreed with the governments; and restrict switching expenditure between operating (resource) and capital expenditure. The budget flexibility rules are quite complicated and explained in our financial framework PR18 document[19].

2.14 Network Rail has received HM Treasury approval to roll forward £480m of capital expenditure to be used later in CP6 and has submitted a request to HM Treasury to carry forward a further £96m of capital underspends from 2019-20 into later years of CP6.

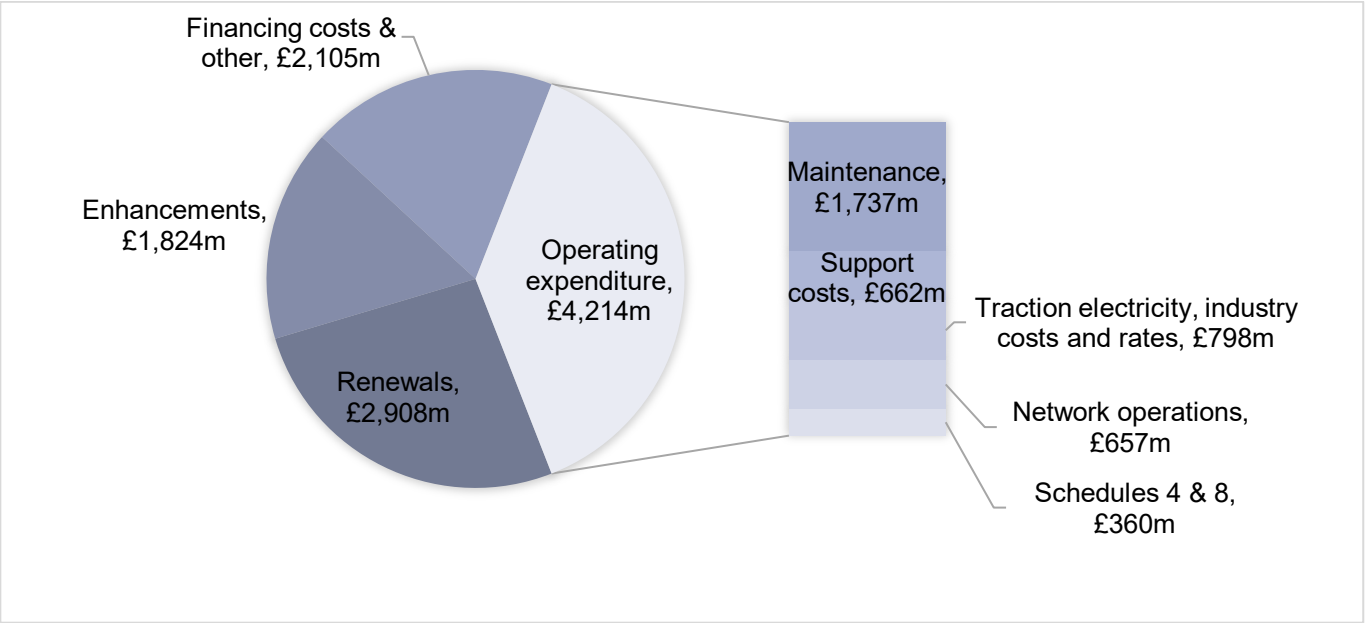
2.15 The Scotland section of Chapter 3 examines this issue in Scotland. As decisions on spending on transport are devolved to the Scottish Government, oversight of the flexibility of grant payments within Scotland falls within the remit of Transport Scotland. For 2019-20, Network Rail in Scotland was granted a partial carry forward of grant funding to be spent later in CP6.

Expenditure

2.16 Network Rail spent around £11 billion in 2019-20. Figure 2.5 shows the main categories of Network Rail's expenditure and these are examined below.

[19] See https://orr.gov.uk/__data/assets/pdf_file/0004/39307/pr18-final-determination-financial-framework.pdf.

Figure 2.5 Network Rail's expenditure in 2019-20



Source: ORR analysis of Network Rail data

Renewals

2.17 Renewals expenditure relates to activities to replace in whole, or in part, network assets that have deteriorated so that they can no longer be maintained economically. Renewal of an asset restores the original performance of the asset and can add additional functionality as technology improves.

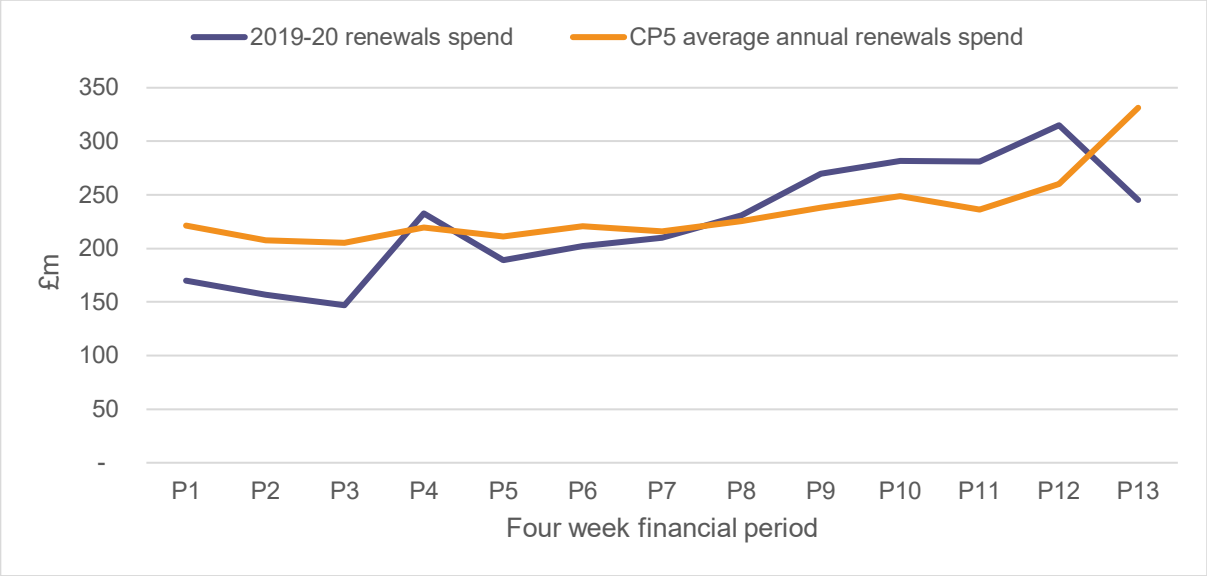
2.18 Network Rail spent £2,908m renewing the rail network in 2019-20, £56m less than the delivery plan. For the work that it delivered, Network Rail spent £34m more renewing the network than planned. Regionally managed expenditure on renewals was £60m higher than delivery plan, with centrally-managed expenditure (largely used to facilitate the overall asset management of the GB-wide network), £116m lower than plan. Network Rail has attributed most of the increased regional expenditure to the acceleration of projects from later years to make use of additional funding from savings made in other areas of the business.

2.19 Last year we raised concerns about Network Rail's increased renewals expenditure towards the end of the financial year. In particular, we were concerned that this 'hockey stick' effect was likely to lead to inefficiencies in delivery due to the likelihood of poor weather during the busiest period of work, and the impact of the uneven profile of work on Network Rail's supply chain.

2.20 Figure 2.6 shows the four-weekly profile of Network Rail's renewals expenditure in 2019-20, compared with the average four-weekly profile in CP5. As shown in Figure 2.6, there was a less marked increase in renewals expenditure towards the end of 2019-20 compared to the trend in CP5. However, the drop off in the final period of 2019-20 is partially attributable to the impact of Covid-19 and there was a more general volatility in the profile of spend across the year. This makes it hard to assess whether our concerns about the hockey stick profile have been addressed.

2.21 We will continue to monitor the profile of renewals expenditure to assess whether an uneven profile is resulting in inefficiency and impacting Network Rail's supply chain. This is particularly important now that Network Rail is subject to more restrictive government budgetary processes (see budget flexibility section above). These restrictions could result in an inefficient profile of renewals work towards the end of a financial year in order for the company to ensure that funding is used.

Figure 2.6 Network Rail's four-weekly renewals expenditure profile



Source: ORR analysis of Network Rail data

Operating expenditure

2.22 Operating expenditure relates to operations, support costs, maintenance, Schedule 4 and 8 payments, and traction electricity, industry costs and rates. These expenditure items are examined below.

Maintenance

2.23 Maintenance expenditure relates to activities that sustain the condition and capability of the existing infrastructure to the previously assessed standard of performance.

2.24 Network Rail spent £1,737m maintaining its rail network in 2019-20, £23m more than its delivery plan. It reported £43m underperformance for the work done. The additional £23m included regional expenditure on resilience works for signalling systems to support train performance, and centrally-managed expenditure on route services (including higher than anticipated supply chain costs).

Network operations

2.25 Network operations expenditure relates to activities to operate the rail network. These include signalling and running Network Rail managed stations.

2.26 Network Rail spent £657m operating the rail network in 2019-20, £8m less than its delivery plan and recognised a £5m outperformance. The largest underspend was from

centrally-managed operations expenditure, mainly in relation to slow implementation of the Performance Innovation Fund (see below)[20]. Additional underspend came from regionally managed spend on signallers, where reduced recruitment led to lower costs and an outperformance for the year.

Support costs

2.27 Support costs relate to activities that facilitate Network Rail's core business activities. These include information management and corporate functions.

2.28 Support costs were £662m in 2019-20, £211m less than the delivery plan. The underspend was mostly from deferral of expenditure to later in CP6 which is treated as neutral for FPM. Support costs outperformed by £97m due to savings including reductions to performance-related pay, favourable actuarial movements on insurance liabilities, rebates for payroll taxes and other non-recurring benefits.

Traction electricity, industry costs and rates

2.29 Network Rail purchases electricity to provide power for electrically powered trains. These costs are matched by an equal amount of income from train operators (it retains a small amount of the cost for electricity used by itself). Industry rates and other costs include Network Rail's share of British Transport Police costs, business rates, RSSB (Rail Safety & Standards Board) costs, the ORR licence fee and railway safety levy. Network Rail has limited control over these costs, which are either set by other government agencies, or by market prices in the case of traction electricity prices.

2.30 Traction electricity, industry costs and rates were £798m in 2019-20, £59m less than the delivery plan due to lower than assumed wholesale electricity prices. This underspend was offset by reduced traction electricity charges (see the Income section).

Schedule 4 and Schedule 8 costs

2.31 The Schedule 4 regime compensates train operators for planned reductions to network availability. It incentivises Network Rail to plan engineering work early and efficiently to reduce disruption. The Schedule 8 performance regime compensates train operators (and vice versa) for the impact of unplanned service disruption.

2.32 Schedule 4 costs were £303m in 2019-20, £12m lower than the delivery plan and generating £25m of outperformance. Schedule 4 costs were lower than the delivery plan mostly due to lower disruption on major renewal programmes than anticipated. The renewals work done in the year exceeded the plan without exceeding the planned cost, generating a financial outperformance which exceeded the delivery plan variance.

2.33 Schedule 8 costs were £57m in 2019-20, £37m lower than the delivery plan (resulting in £37m of financial outperformance). This improvement was due to Network Rail performing better (it caused less disruption to train services than assumed in the delivery plan).

[20] This underspend does not count as outperformance.

Enhancements

2.34 Enhancements are changes to improve network capacity or capability, for example enabling more train journeys or higher speeds. Network Rail expects to spend around £11bn on enhancements to its network in CP6. This is subject to approvals from the Department for Transport (DfT) and Transport Scotland under their 'pipeline' approaches for releasing funds as individual projects progress.

2.35 Network Rail spent £1,824m on enhancements in 2019-20. This represents a significant reduction in expenditure compared to 2018-19 and the annual average expenditure on enhancements in CP5. It was also £81m lower than the delivery plan which Network Rail has attributed to deferral of work into later years of CP6. Whilst there are variances through the portfolio, relative to previous years and for complex programmes, this is quite a small variance overall.

2.36 Enhancements was the only area of significant financial underperformance by Network Rail in 2019-20 (£86m underperformance compared to the CP6 delivery plan for the work done). Network Rail has mostly attributed this to increases in anticipated final costs because of delays and substantiation of disputed costs on two major programmes: Crossrail and the Great Western Electrification Project (GWEP).

Table 2.2 Enhancements expenditure in 2019-20, Great Britain

£m	Actual expenditure	Delivery plan variance better/(worse)	(Under) / out performance
Midland Main Line program	281	5	(1)
East Coast Main Line enhancements program	185	(27)	5
Trans Pennine route upgrade	182	22	-
Great Western electrification	177	33	(54)
East West Rail phase 2	92	21	-
Crossrail	77	5	(76)
Thameslink	75	(17)	(4)
Aberdeen to Inverness	69	2	4
Other Network Rail-funded enhancements	686	37	40
Total Network Rail-funded enhancements	**1,824**	**81**	**(86)**
Third party-funded enhancements	423	n/a	n/a
Total enhancements	**2,247**	n/a	n/a

Source: Network Rail's regulatory financial statements

2.37 The financial matters relating to key schemes are:

- *Midland Main Line programme (£281m expenditure in 2019-20)*: Expenditure on upgrading the London to Sheffield route was the largest project spend in the year. Expenditure was broadly in line with the delivery plan with £1m underperformance in 2019-20.

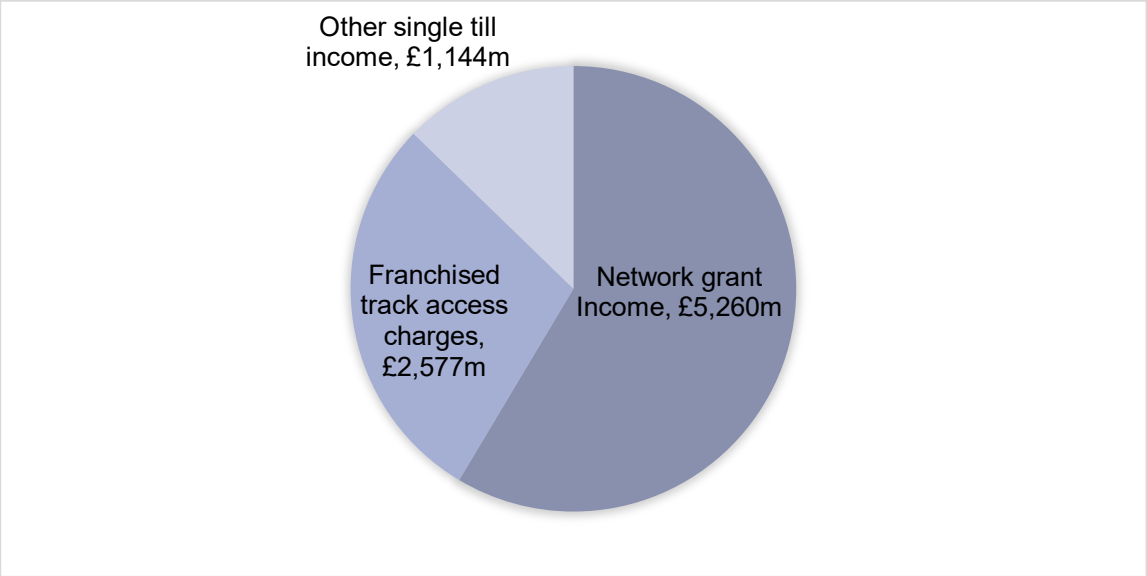
- *East Coast Main Line enhancements program (£185m):* The work delivered on this project in the year was £27m higher than the delivery plan due to a re-profiling of expenditure. £5m outperformance has been reported for the year.
- *Trans Pennine route upgrade (£182m):* The upgrade work for the Manchester to York route was £22m lower than the delivery plan in the year due to delays in approval of individual projects within the portfolio. The cost of the work delivered was in line with the delivery plan.
- *Great Western Electrification Programme (GWEP) (£177m):* Network Rail's largest enhancement scheme in CP5 was the continuing electrification of the railway between South Wales and London Paddington. The programme financially underperformed by £54m in 2019-20 due to contractor claims and changes to the scope of work on the Severn Tunnel.
- *East West Rail phase 2 (£92m):* This scheme will provide a direct link between Oxford/Aylesbury and Milton Keynes/Bedford. The scheme experienced slippage in the year due to a later than planned compulsory purchase order.
- *Crossrail (£77m):* This scheme financially underperformed by £76m due to changes to contractors including the collapse of Carillion, and other factors. Crossrail enabling works experienced slippage partly offset by the reclassification of some third party funded expenditure. These did not affect the reported financial underperformance.
- *Thameslink (£75m):* This programme involves changes to track layout, signalling and station upgrades to create new connections and increase capacity for north-south journeys through London. It overspent by £17m in the year mainly due to the earlier than planned purchase of Chart Leacon Depot.
- *Aberdeen to Inverness (£69m):* This Transport Scotland-funded upgrade is intended to improve connectivity and improve services in the North-East of Scotland. Expenditure was broadly in line with the delivery plan, with £4m of outperformance recognised.
- *Other Network Rail-funded enhancements (£686m):* Network Rail undertook a number of smaller PR18 specified projects, none of which incurred materially different spend to Network Rail's delivery plan.
- *Third-party funded enhancements (£423m):* These were enhancement schemes that were not directly funded by DfT or Transport Scotland. It included £189m of expenditure funded by HS2 (which is itself funded by DfT).

Income

2.38 Network Rail received £8,981m of income in 2019-20. Figure 2.7 shows this split by major income category.

2.39 The majority of Network Rail's income was from government network grants (£5,260m) with £2,577m received from track and other access charges from franchised train operators and £1,144m from other single till income (OSTI). OSTI comprises income from Network Rail's properties and stations, freight and open access charges, and from other sources.

Figure 2.7 Network Rail's income in 2019-20



Source: ORR analysis of Network Rail's regulatory financial statements

2.40 Network Rail's income was £199m lower than anticipated in the delivery plan, mainly from a £627m reduction in network grant income, offset by higher OSTI.

2.41 Network Rail sold part of its network in Wales (the Core Valley Lines, CVL[21]), to the Welsh Government in March 2020. Transport for Wales owns the CVL, which Amey Keolis Infrastructure manages on its behalf. The sale resulted in £470m of property sales income and an equal and offsetting £470m deduction from Network Rail's regulatory asset base (RAB)[22]. It also changes Network Rail's financial settlement for the remainder of CP6 as it will not need as much funding for Wales.

Research and development expenditure

2.42 Our PR18 determination included £245m[23] of funding for research and development (R&D) in CP6. Network Rail has a centrally-managed programme to manage this investment. The programme spent £60m in 2019-20 which was ahead of the delivery plan for the year, due to acceleration of work. Overall, we consider that good progress has

[21] The CVL represents 9.2% of the route miles of the railway in Wales.

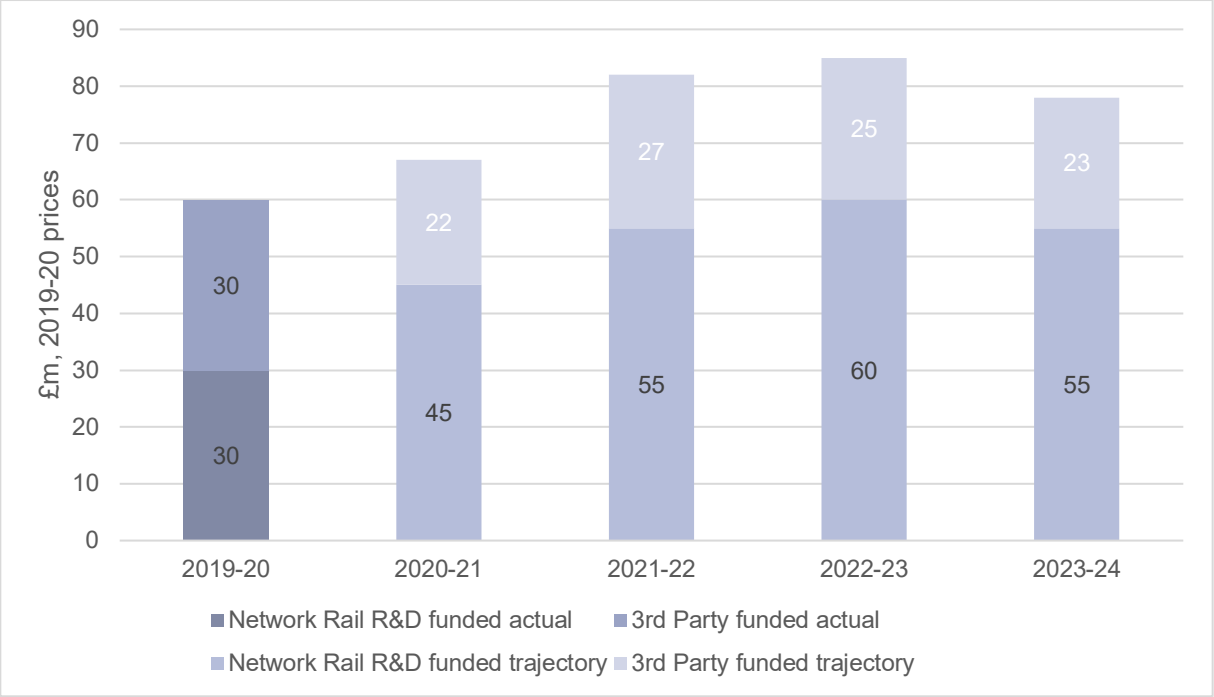
[22] The income and RAB deduction were calculated using the depreciated replacement cost of the CVL compared to the rest of the network, and then applying that ratio to the RAB.

[23] In 2017-18 prices.

been made on developing Network Rail's CP6 R&D programme in 2019-20. We will continue to monitor and report on the progress of these projects over the next year.

2.43 Network Rail is currently projecting to receive £127m of third-party funding to support its R&D programme in CP6 (against an assumption of £112m), which it is planning to spend in addition to the PR18 funding. It secured £30m of third-party funding (from a range of sources) for R&D projects in 2019-20, which was double what it assumed that it could achieve.

Figure 2.8 Network Rail's actual and planned R&D expenditure in CP6



Source: Network Rail's regulatory financial statements and other submissions.

2.44 Network Rail's R&D programme has commenced around a hundred projects with a committed spend of £192m across CP6. These projects include:

- the development of a vegetation decision support tool that makes better use of aerial surveys to detect changes in earthworks and vegetation encroachment;
- deploying a degraded mode working system trial in the Wales & Western region. This project aims to resolve long train delays through improved management of signalling system failures;
- a new generation of standardised footbridges that should reduce costs and installation time; and
- the development of an application protocol interface (API), to make live monitoring data more readily available for asset management decisions.

2.45 Network Rail's R&D expenditure in 2019-20 included £3m funded by Transport Scotland.

2.46 Annex D summarises the progress of Network Rail's CP6 R&D projects.

Performance innovation fund

2.47 In PR18, we established a £40m performance innovation fund (PIF) to support innovative projects aimed at driving improvements in train service performance. The fund provides an incentive for the rail industry as a whole to think creatively about ways to improve train performance, and to improve knowledge sharing about what does and does not work. The PIF is open to bids from across the rail industry with a focus on removing obstacles in current working practices that prevent a more effective focus on performance improvement.

2.48 Progress with the PIF has been slow in 2019-20. There have been few suitable bids to access the fund resulting in no expenditure during the year, compared to the £2m that was allocated. Recognising our concerns, Network Rail has sought to improve engagement with industry to get greater buy-in. This has resulted in increased applications which we welcome. We expect Network Rail to clearly show how schemes funded by the PIF will deliver benefits to achieve the original objectives of the PIF and we will continue to monitor this.

Productivity

2.49 Improving productivity is one of the ways for a company to become more efficient. However, we have made little use of productivity measures in our monitoring of Network Rail's efficiency in previous control periods. For CP6, we have required Network Rail to develop and share with us regionally disaggregated productivity measures to help better understand the scope for future efficiency improvements.

2.50 Network Rail has developed a number of measures which it is using to improve its understanding of efficiency and where there may be scope to improve, such as time-on-tools. We will continue to engage with Network Rail on the development of these measures, and how they can be used to inform our financial monitoring over the next year.

Leading indicators of efficient delivery

2.51 Poor planning caused a number of problems with Network Rail's renewals delivery and efficiency in CP5. So we requested that Network Rail demonstrate it is better prepared to deliver efficiently from the start of CP6. As reported in our recent publications and letters, we have seen progress with these leading indicators of efficient delivery, though have concerns in some areas. This section provides an update on Network Rail's preparations to deliver efficiently in 2020-21 as at the start of the year.

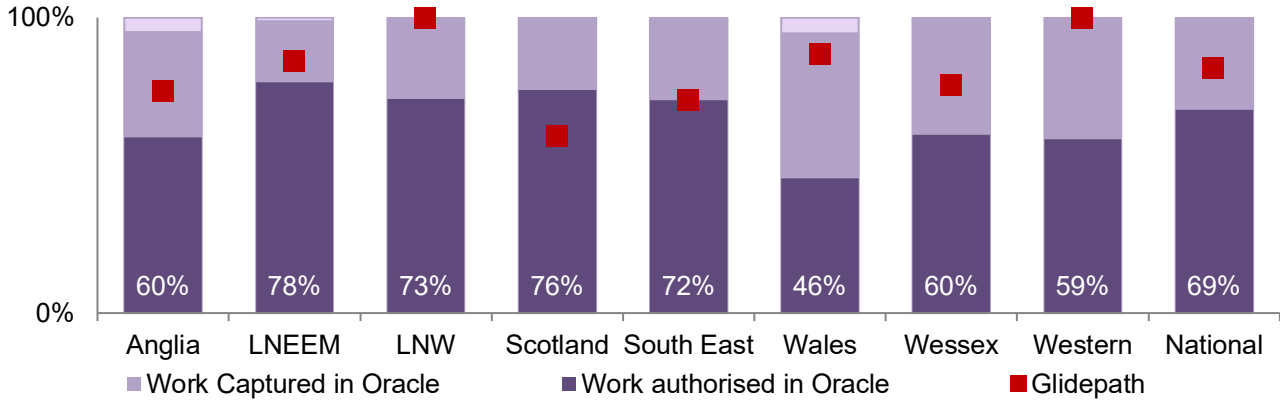
2.52 This section is disaggregated by geographical route rather than region. This is because some of the internal reorganisation from routes into regions as part of the Putting Passengers First (PPF) reorganisation has not yet been implemented. There will be disruption, particularly to renewals delivery and related efficiencies during the first six months of 2020-21, which these leading indicators may not have fully taken into account. We will report on this in due course.

2.53 Chapter 3 provides a regional analysis of these leading indicators.

Renewals planning

2.54 Effective renewals planning is important because it improves the robustness of the rail network and reduces costs. It provides a stable profile of work for Network Rail's supply chain, can avoid more critical work than necessary being squeezed into the final quarter of the year (when weather conditions are most challenging) and prevent slippage of work into the following year.

Figure 2.9 Percentage (by value) of 2020-21 renewals projects with financial authorisation



Source: Network Rail

2.55 For Great Britain, 69 percent of Network Rail's renewals projects were authorised by the end of 2019-20. This is significantly below its target of 83 percent due to slower than planned progress[24] (although a 2 percentage points improvement on last year). Based exclusively on this key indicator we would be concerned at the progress made by Network Rail as we would expect authorisation of projects to be closer to 100 percent going into the new financial year. However, financial authorisation only provides a partial picture of renewals workbank planning. Remits issued and accepted by the supply chain shows progress made at an earlier stage of the planning lifecycle. Network Rail has issued, and its supply chain accepted, 82 percent of planned renewals in 2020-21, meaning further progress than suggested by using financial authorisations alone.

2.56 We consider that Network Rail has made progress in developing its 2020-21 renewals workbank, however, not as much as we would have expected by the start of the year. Including the additional current challenges arising from Covid-19, this represents a risk to the efficient delivery of renewals in 2020-21.

Securing engineering access to the railway

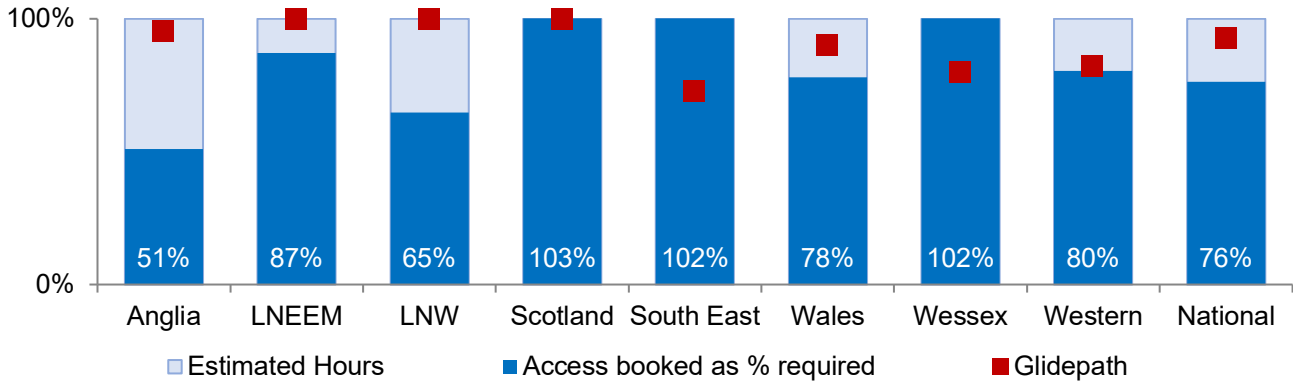
2.57 Network Rail fell short of its internal target for booking disruptive access to the network for planned engineering work in 2020-21. Against a target of 93 percent, it only achieved 76

[24] Some routes have attributed delays to authorisation to increased scrutiny over unit rates and costs.

percent of network access booked by the start of the year due to slower than planned progress[25].

2.58 As with renewals workbank planning, the lower than target level of possessions that have been booked represents a risk to the efficient delivery of renewals in 2020-21.

Figure 2.10 Percentage of required network access in 2020-21 booked

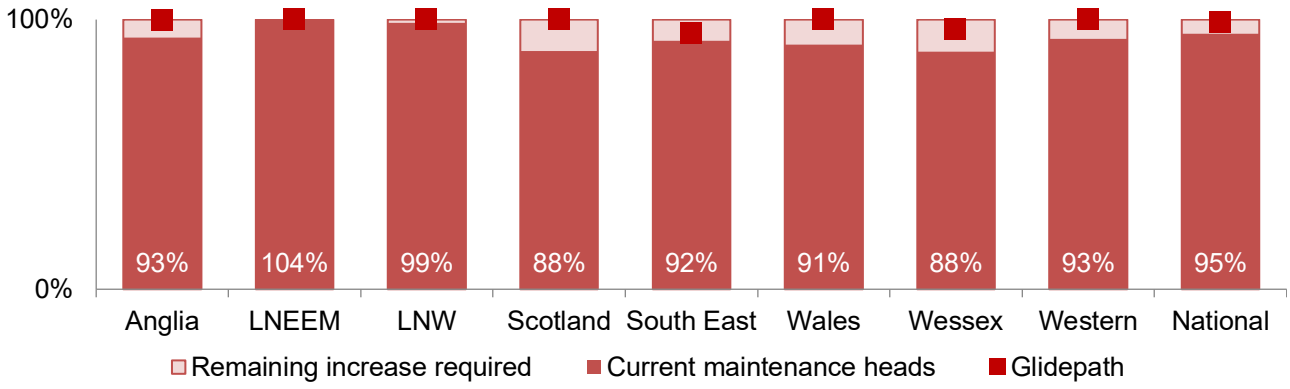


Source: Network Rail

Maintenance capacity

2.59 Network Rail has reported a 4 percent shortfall against its required maintenance headcount for 2020-21. The impact of Covid-19 will create a significant additional challenge to staff recruitment, which will likely further delay its recruitment of additional maintenance staff.

Figure 2.11 Maintenance headcount compared to 2020-21 requirement



Source: Network Rail

Efficiency planning

2.60 As shown in Table 2.3, Network Rail considers that nearly 70 percent (by value) of 2020-21 target efficiencies will be achieved from projects that have already been delivered and are waiting for benefits to be realised, or have clear project plans in place. However, that

[25] Some routes consider that their glidepath targets were too challenging as these were set using a different mix of types of work than planned for 2020-21.

means that almost 30 percent of 2020-21 target efficiencies have no clear project plans or plans are in place with low confidence in delivery. Covid-19 is likely to have an impact on the delivery of efficiencies in 2020-21 and we will continue to monitor progress on this through year 2.

Table 2.3 Network Rail's assessment of the maturity of its 2020-21 efficiency plans (by value)

	Anglia	LNEEM	LNW	Scot	South East	Wales	Wessex	West	Total
Project delivered, waiting for benefits to be realised	3%	31%	26%	21%	0%	20%	10%	66%	21%
Project in place with delivery plan and milestones	75%	59%	21%	35%	62%	68%	52%	13%	47%
Strategic theme applied, commitment to deliver but no plan in place	22%	1%	52%	40%	39%	12%	38%	21%	31%
Unknown	0%	9%	1%	4%	0%	1%	0%	0%	2%
	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Network Rail

2.61 As we reported in our December 2019 letters[26], we commissioned an independent reporter, Nichols, to review Network Rail's efficiency plans for year 1 and 2 of CP6[27]. Nichols found that there is clear ownership of the business changes that are required to deliver required efficiency improvements. However, Nichols considered that there is a variable quality of documentation of how forecast efficiencies have been calculated, and how efficiencies will be delivered.

2.62 Since Nichols' work concluded, Network Rail has made further progress including the strengthening of resources and more robust programme-level oversight. However, as noted in the efficiency section above, substantially more still needs to be done, particularly in relation to the quality of renewals efficiency plans, as these are critical to delivering required renewals volumes and the increasing efficiency challenge in later years of CP6.

Regulatory finances

2.63 Network Rail's regulatory asset base increased by £0.6bn to £72.5bn in 2019-20. The increase was due to indexation (for the effect of inflation) partly offset by the transfer of the CVL to the Welsh Government (£0.5bn, see income section).

2.64 Network Rail no longer issues debt to fund its capital expenditure. However, it continues to hold legacy debt (£53.5bn) including instruments issued to investors before the company's transfer to the public sector. It paid £2.1bn of financing costs on this debt during the year, which is funded by DfT outside of the PR18 determination.

[26] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment

[27] See https://orr.gov.uk/__data/assets/pdf_file/0020/42176/network-rails-preparations-to-deliver-efficiently-in-CP6-GB.pdf

3. Regional analysis

3.1 This chapter provides an analysis of the financial performance of each of Network Rail's five regions – Scotland, North West & Central, Eastern, Southern and Wales & Western, and for its national functions. We also provide a separate analysis for Wales. Caution is needed when comparing the relative performance of Network Rail's regions. This is because financial data in this chapter has not been normalised for differences in the physical, geographical and operational characteristics of each region.

3.2 Annex A provides detailed financial tables for Network Rail's activities in Great Britain, England & Wales, separately for its regions and national functions, and for Wales.

3.3 This chapter examines regions' readiness to deliver efficiently in 2020-21. For convenience, the leading indicators charts presented in Chapter 2 are also included in the Scotland section below but not in the other regions.

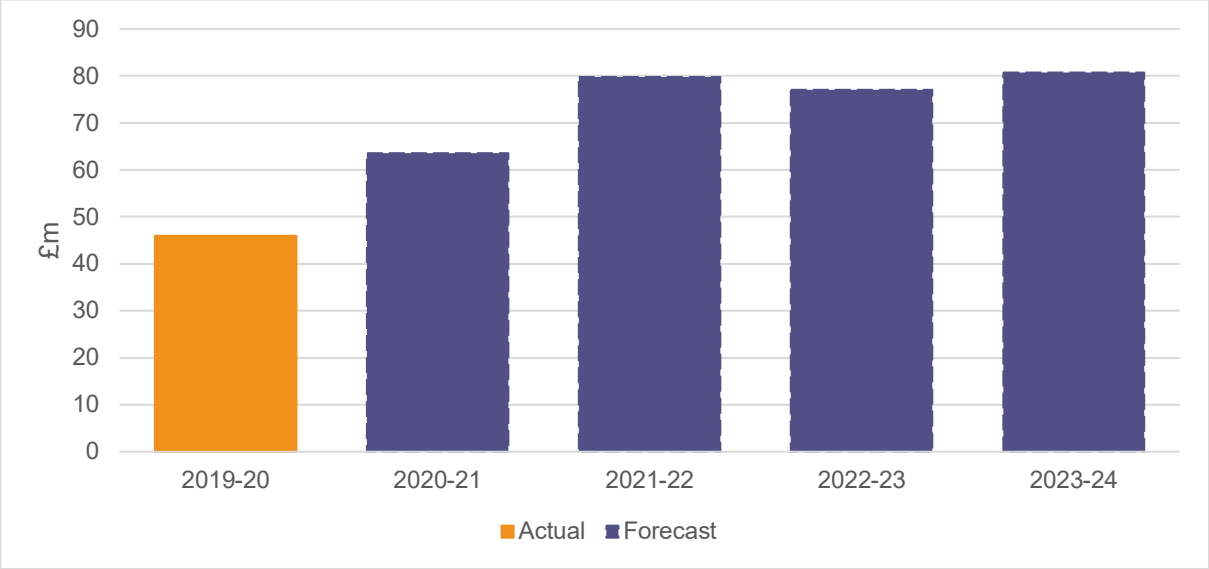
Scotland

Efficiency in 2019-20

3.4 Our PR18 determination concluded that Network Rail should improve its efficiency by 3.5 percent (£24m) in 2019-20 in Scotland. This means that to deliver the same level of output, we expected Network Rail's costs in Scotland to be £24m lower than in 2018-19, the final year of CP5.

3.5 The Scotland region exceeded its delivery plan target of £39m for the year and delivered £46m of efficiency improvements. This forms part of Network Rail's plans to deliver £347m of efficiency in Scotland in CP6. Network Rail's delivery plan trajectory for Scotland is shown in Figure 3.1.

Figure 3.1 Scotland's actual and forecast efficiency in CP6



Source: Network Rail

3.6 Figure 3.2 shows the main initiatives that have contributed to Network Rail in Scotland's efficiency improvement in 2019-20. The two most significant initiatives were:

- *Improved contracting strategies (£15.1m):* Network Rail in Scotland's largest efficiency initiative in 2019-20 was the implementation of a new contractor framework for the delivery of geotechnical works (£10.0m efficiency). The new collaborative partnership should result in lower costs for the specialist rock-cutting supplier. This has enabled lower contractor rates for the work.
- *Optimisation of access (£13.8m):* Optimisation of access encompasses a number of initiatives to make disruptive track access possessions more efficient. These included using extended possessions to reduce repetition of setup and hand back activities on multiple possessions, and co-ordinating disruptive access requirements across different asset types to minimise the need for additional possessions on the same areas of track.

Figure 3.2 Scotland's main efficiency initiatives in 2019-20

Source: Network Rail

Financial performance

3.7 As shown in Table 3.1, Network Rail in Scotland's financial performance was in line with its delivery plan for the year, with the main variances being underperformance in income and Schedule 4 costs and outperformance in enhancements and Schedule 8 costs.

Table 3.1 Scotland's financial performance in 2019-20

£m, 2019-20 prices	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Network grant income	471	(28)	-
Franchised track access charges	367	(7)	(3)
Other single till income	40	(5)	(5)
Total income	**878**	**(40)**	**(8)**
Schedule 4	21	(8)	(8)
Schedule 8	10	5	5
Network operations	52	3	3
Support	82	6	2
Traction electricity, industry costs & rates	69	5	-
Maintenance	164	3	(1)
Total operating expenditure	***398***	***14***	***1***
Capex – Renewals	335	53	(2)
Capex – Enhancements	204	4	9
Total capital expenditure	***539***	***57***	***7***
Financing costs & other	210	15	-
Total expenditure	**1,147**	**86**	**8**
Financial performance measure (FPM)			**0**

Source: Network Rail's regulatory financial statements

Expenditure

3.8 Network Rail spent £1,147m in Scotland in 2019-20. Expenditure in each of the different categories in Table 3.1 is examined below.

Operating expenditure

Maintenance

3.9 Network Rail spent £164m maintaining the rail network in Scotland in 2019-20. This was broadly in line with its delivery plan for the year. Track maintenance makes up the largest component of Network Rail's maintenance costs in Scotland (£77m).

Support costs

3.10 Support costs were £82m in Scotland, £6m less than the delivery plan due to increased cost savings with £2m of outperformance. This overall outperformance includes £8m of outperformance in centrally-managed expenditure, mainly due to savings made in staff costs. However, there was £6m underperformance in regionally managed expenditure, in particular relating to overspend on utilities.

Network operations costs

3.11 Network Rail spent £52m on network operations costs in Scotland in 2019-20, £3m lower than the delivery plan. Slow recruitment of relief signallers led to a reduction in staff costs. This was partially offset by higher overtime costs.

Schedules 4 & 8

3.12 Schedule 4 costs in Scotland were £21m in 2019-20, £8m higher than the delivery plan with £8m of underperformance recognised. Network Rail has mostly attributed this to the adverse impact of two weather events: the hot summer in 2019 and heavy rainfall in February 2020, as well as commercial claims.

3.13 Schedule 8 costs were £10m in 2019-20, £5m lower than planned due to better than expected train performance.

Traction electricity, industry costs and rates

3.14 Network Rail in Scotland incurred costs of £69m in the year for traction electricity, industry costs and rates. Traction electricity costs were £33m of this, and were lower than the delivery plan due to reduced market prices for electricity. This was offset by reduced traction electricity income received from train operators, as mentioned below.

3.15 Industry costs and rates in 2019-20 included business rates (£24m), British Transport Police costs (£8m), ORR licence fee and railway safety levy (£3m), and RSSB (Rail Safety & Standards Board) costs (£1m). These costs were broadly in line with the delivery plan.

Renewals

3.16 Network Rail spent £335m renewing the rail network in Scotland in 2019-20, £53m lower than the delivery plan. For the work that was delivered, spending was broadly in line with plan, however, signalling volumes relating to CP6 projects were lower due to delays with Scotland's signalling renewal programme. Network Rail in Scotland is confident that it will catch up on this work in CP6.

Enhancements

3.17 Network Rail in Scotland spent £204m on enhancement projects in the year, £4m lower than its delivery plan and a £9m outperformance.

3.18 The two largest projects in the year were Aberdeen to Inverness (£69m, for more information see Chapter 2) and the Edinburgh to Glasgow Improvement Project (£37m), which both outperformed financially. Network Rail has attributed this to effective risk management.

Allocation of centrally-managed costs to Scotland

3.19 Costs incurred by Network Rail's national functions ('centrally-managed costs') are re-charged to regions in proportion to their use of these functions and in accordance with the ORR's regulatory accounting guidelines[28]. £401m was recharged to Scotland which is lower than the delivery plan assumption of £437m. This was consistent with the savings made by national functions, as discussed in the national functions section of this chapter.

[28] These costs are included in the expenditure and income lines shown in Table 3.1.

Income

3.20 Network Rail received £878m of income in Scotland in 2019-20. The majority of this was from government network grants (£471m). Network Rail in Scotland also received £367m from track and other access charges and £40m from other single till income (OSTI).

3.21 Income was lower than the delivery plan mostly due to reduced draw down of government grants. However, Network Rail in Scotland also received lower track access charges (including lower income for traction electricity costs reflecting lower market electricity prices) and made lower than assumed property sales, both of which contributed to negative FPM.

Grant funding in Scotland

3.22 Oversight of the flexibility of grant payments within Scotland falls within the remit of Transport Scotland. Network Rail in Scotland was granted a partial carry forward of the Scotland grant for 2019-20 and, as its underspend for the year fell within the limit, this underspend was carried forward to be spent later in the control period.

Leading indicators of efficient delivery

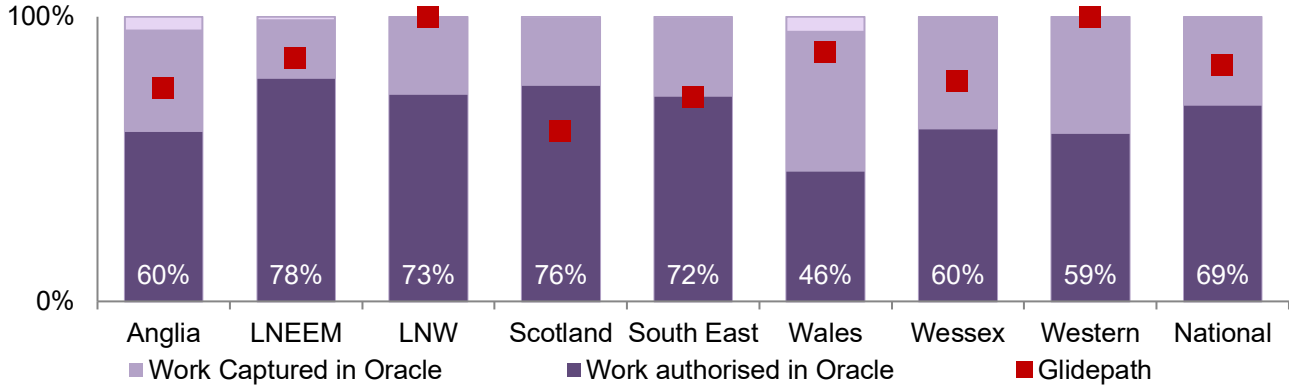
3.23 This section provides an update on Network Rail in Scotland's preparations to deliver efficiently in 2020-21. The full impact of Covid-19 on Network Rail's activities in 2020-21 is not yet well understood. There will be continued disruption, particularly to renewals delivery and related efficiencies during the first six months of 2020-21. However, the network is also quieter than normal, which presents opportunities to undertake additional work in some areas. We will report on this in due course.

Renewals planning

3.24 As explained in Chapter 2, effective renewals planning is important because it improves the robustness of the rail network and provides a stable profile of work for Network Rail's supply chain. At the start of 2020-21, 76 percent of Scotland's renewals projects for the year (by value) had completed detailed designs and received financial authorisation for delivery. This was 16 percentage points ahead of Scotland's internal target and 7 percentage points above the national average.

3.25 Based exclusively on this key indicator we would be concerned at the progress made by Network Rail in Scotland as we would expect authorisation of projects to be closer to 100 percent going into the new financial year. However, financial authorisation only provides a partial picture of renewals workbank planning. Remits issued and accepted by the supply chain shows progress made at an earlier stage of the planning lifecycle. Network Rail in Scotland has issued, and its supply chain accepted, 93 percent of planned renewals in 2020-21. We consider that Scotland has made further progress in developing its 2020-21 renewals workbank than most regions, however, not as much as we would have expected by the start of the year. Including the additional challenge of the Covid-19 lockdown restrictions in Scotland, this represents a risk to the efficient delivery of renewals in Scotland in 2020-21.

Figure 3.3 Percentage (by value) of 2020-21 renewals projects with financial authorisation

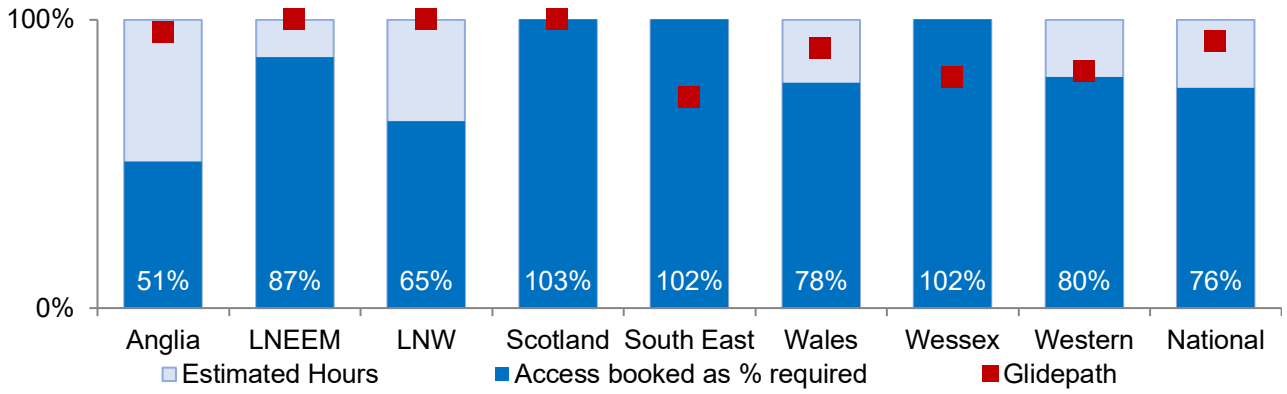


Source: Network Rail

Securing engineering access to the railway

3.26 Network Rail in Scotland has achieved its internal target for booking disruptive access for planned engineering work in 2020-21. It had the highest percentage of disruptive possessions booked of any route, with all expected possessions in place for 2020-21.

Figure 3.4 Percentage of required network access in 2020-21 booked

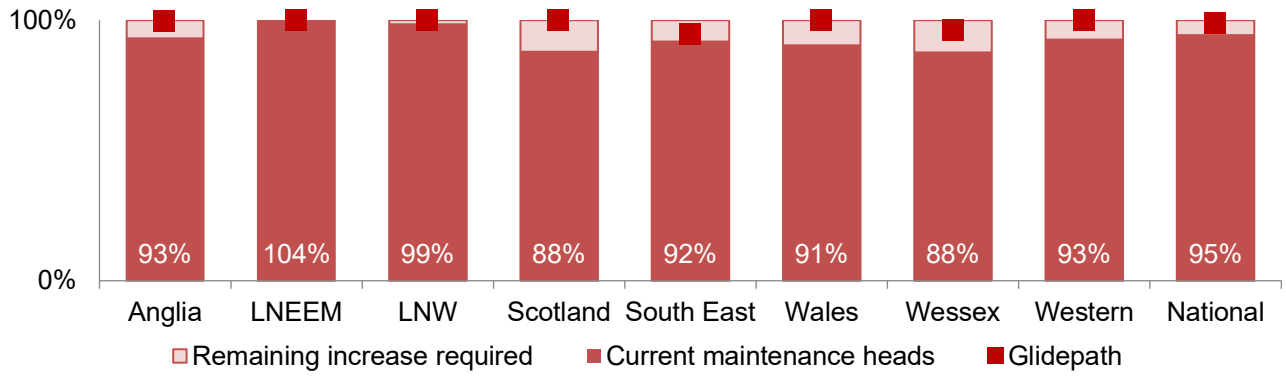


Source: Network Rail

Maintenance capacity

3.27 Network Rail in Scotland has a 12 percent shortfall compared to the maintenance headcount that it stated that it requires in 2020-21. It is working to increase direct labour staff levels and is currently supplementing the difference with subcontracted labour, but continues to identify hiring for remote locations as a risk. We consider that this under-resourcing presents a risk to the efficient delivery of maintenance activities in Scotland and expect Network Rail in Scotland to do more to fulfil its required maintenance headcount.

Figure 3.5 Maintenance headcount compared to 2020-21 stated requirement



Source: Network Rail

Efficiency planning

3.28 As shown in Table 3.2, Network Rail considers that around 60 percent (by value) of its 2020-21 target efficiency will be achieved from projects that have already been delivered and are waiting for benefits to be realised, or have clear project plans in place. However, that means that around 40 percent of 2020-21 target efficiencies have no clear project plans or plans are in place but low confidence in delivery.

3.29 Network Rail in Scotland is reporting that 61 percent of 2021-22 (year 3 of CP6) efficiencies are delivered or have plans in place, consistent with 2020-21. Overall, the readiness metrics for Scotland in year 3 are all above or consistent with Network Rail's current glidepath. However, the impact of Covid-19 continues to remain unclear, with the loss of high output work in Scotland at the start of 2020-21 likely to have an on-going impact.

3.30 As we reported in our December 2019 letters[29], we commissioned an independent reporter, Nichols, to review Network Rail's efficiency plans for years 1 and 2 of CP6. Nichols found that there was clear ownership within Scotland of the business changes that are required to deliver required efficiency improvements. However, Nichols considered that there was variable quality of documentation of how forecast efficiencies have been calculated, and will be delivered.

3.31 Since Nichols' work concluded, Network Rail has made further progress including strengthening resources and putting more robust programme-level oversight in place. However, substantially more still needs to be done, particularly in relation to the quality of renewals efficiency plans, as these are critical to delivering required renewals volumes and the increasing efficiency challenge in the later years of CP6. We will continue to monitor and report on progress in Scotland over the next year.

[29] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment

Table 3.2 Network Rail's assessment of the maturity of its 2020-21 efficiency plans (by value)

	Anglia	LNEEM	LNW	Scot	South East	Wales	Wessex	West	Total
Project delivered, waiting for benefits to be realised	3%	31%	26%	21%	0%	20%	10%	66%	21%
Project in place with delivery plan and milestones	75%	59%	21%	35%	62%	68%	52%	13%	47%
Strategic theme applied, commitment to deliver but no plan in place	24%	1%	52%	40%	39%	12%	38%	21%	31%
Unknown	-3%	9%	1%	4%	0%	1%	0%	0%	2%
	100%	100%	100%	100%	100%	100%	100%	100%	100%

Key: Row 1: Projects delivered and waiting for benefits to materialise; Row 2: Projects with delivery date and milestones, business confident in delivery; Row 3: Plan in place but lower confidence in delivery; and Row 4: Commitment to deliver, but no strategic theme assigned.

Source: Network Rail

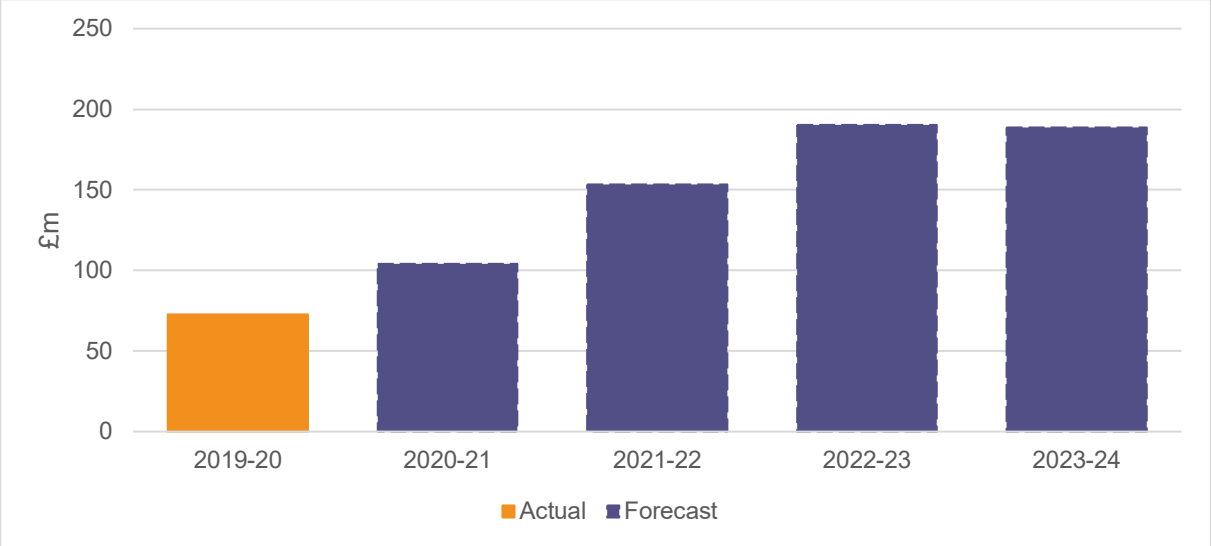
Southern

Efficiency in 2019-20

3.32 Our PR18 determination concluded that South East should improve its efficiency by 5.1 percent (£47m) and Wessex by 5.1 percent (£25m) in 2019-20. These two routes now make up the Southern region, so overall we expected costs in the Southern region in 2019-20 to be 5.1 percent (£72m) lower than in 2018-19.

3.33 The Southern region achieved its target for the year and delivered £73m of efficiency improvements. This forms part of Southern's plans to deliver £710m of efficiencies in CP6. Network Rail's delivery plan trajectory for Southern is shown in Figure 3.6.

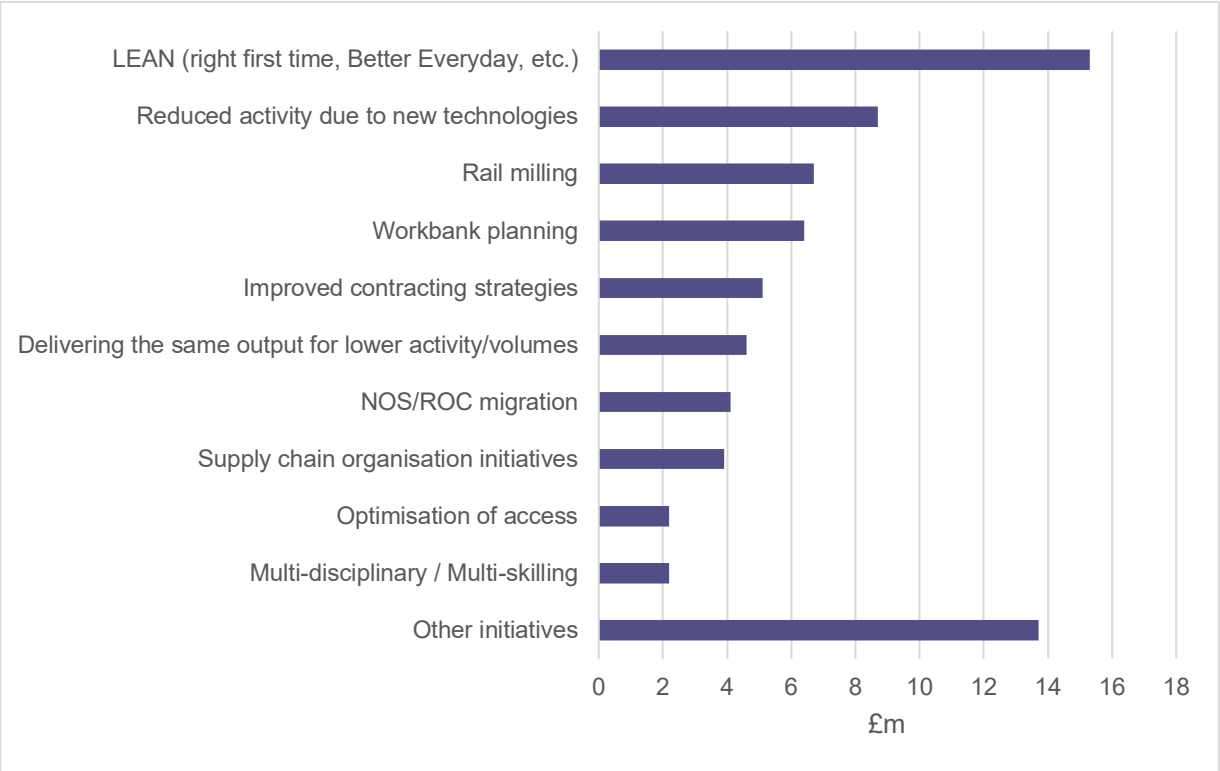
Figure 3.6 Southern's actual and forecast efficiency in CP6



Source: Network Rail

3.34 The efficiencies delivered this year cover a wide range of activities. These are shown in Figure 3.7 and summarised below.

Figure 3.7 Southern's main efficiency initiatives in 2019-20



Source: Network Rail

- *LEAN initiatives (£15.8m*): This is about improving the way a business works and making processes more efficient, Network Rail also uses the terms 'Better Everyday' and 'right first time' delivery. They include planning work better and reducing lost staff time. Southern delivered £5.5m more of these efficiencies than expected in the 2019-20 delivery plan. For more detail on LEAN efficiencies see Chapter 2.

- *Reduced activities due to new technologies (£8.7m)*: The Southern region has become more efficient by using new technologies, which helps reduce the amount of work required and improves delivery. An example of this is the introduction of NSCDs ('negative short-circuiting devices'), which speed up the process by which the railway is made safe to work on, so that more work can be delivered at any one time.

- *Workbank planning (£6.9m*): This is about planning work better, which should mean less disruption and lower costs. Southern has detailed the following initiatives: 'stable workbanks', which means that work doesn't need to be re-planned; 'packaging of works', by doing more work at the same time; and 'early scheme development', which means improving the early stages of designing schemes.

Financial performance

3.35 As shown in Table 3.3, Southern financially outperformed by £81m compared to the delivery plan, largely because of lower schedules 4&8 payments as well as higher than expected property sales.

Table 3.3 Southern's financial performance in 2019-20

£m	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Network grant income	1,281	(161)	-
Franchised track access charges	614	(25)	(1)
Other single till income	269	37	33
Total income	**2,164**	**(149)**	**32**
Schedule 4	75	8	14
Schedule 8	(27)	36	36
Network operations	177	3	2
Support	141	39	8
Traction electricity, industry costs & rates	234	22	1
Maintenance	380	(2)	(11)
Total operating expenditure	***980***	***106***	***50***
Capex – Renewals	706	(25)	(13)
Capex – Enhancements	209	12	12
Total capital expenditure	***915***	***(13)***	***(1)***
Financing costs & other	477	33	-
Total expenditure	**2,372**	**126**	**49**
Financial performance measure (FPM)			**81**

Source: Network Rail's regulatory financial statements

Expenditure

3.36 Southern's total costs were £2,372m in 2019-20, £126m higher than expected in the region's delivery plan for the year. Expenditure in each of the different categories in Table 3.3 is examined below.

Operating expenditure

Maintenance

3.37 Maintenance costs were £380m in 2019-20, £2m more than its delivery plan and £11m of financial underperformance was reported, of which the majority (£8m) was related to costs controlled by the region directly. The underperformance mostly related to track expenditure, which was caused by higher than expected materials costs.

Support costs

3.38 Support costs were £141m, £39m lower than in the delivery plan and £8m of outperformance was recognised as a result of the delivery of efficiencies in the areas of recruitment and staff pay, in particular there were lower than expected staff bonuses.

Network operations costs

3.39 Network operations expenditure was £177m, £3m lower than in the delivery plan, and £2m of financial outperformance was reported. Costs were higher than last year because of additional expenditure at Waterloo station.

Schedules 4 & 8

3.40 Schedules 4&8 costs were £48m, £44m lower than the delivery plan and £50m of financial outperformance has been reported in this area. This is largely because of better performance by Network Rail, which resulted in lower payments to train operators and unanticipated Schedule 8 receipts.

Traction electricity, industry costs and rates

3.41 Traction electricity, industry costs and rates costs were £234m including traction electricity (£157m), business rates (£42m) and British Transport Police costs (£27m). Overall expenditure was £22m lower than the delivery plan largely because of reduced market prices for electricity.

Renewals

3.42 Renewals costs were £706m, £25m higher than the delivery plan and £13m of financial underperformance was recognised, of which £18m was controlled by the region. Financial underperformance was largely driven by underperformance on earthworks (£9m) and signalling (£6m). Earthworks underperformance was largely because of additional asset repair works, higher costs for work on re-routing underground utilities and higher contractor costs on some projects. Signalling underperformance was largely driven by higher than expected costs for the Brighton mainline upgrades due to higher tender prices, issues obtaining access from third parties and unfavourable commercial settlements.

Enhancements

3.43 Enhancements costs were £209m, £12m lower than the delivery plan, and £12m of financial outperformance was recognised. The largest areas of expenditure were the Thameslink programme (£60m attributed to Southern[30], for more information see Chapter 2), the South London high voltage power supply programme (£20m) and spending on depots and stabling (£17m). The financial performance was largely due to risks not materialising as expected and contingency funding not being used, as project costs were lower than anticipated.

Income

3.44 The region had a total of £2,164m of income, which was £149m lower than expected. Despite this, the region reported £32m of financial outperformance. This is largely because the lower than expected income was from the network grant, which does not form part of the financial performance calculation as it is not controllable by Network Rail. The £32m of financial outperformance is largely due to higher than expected property sales.

[30] Thameslink expenditure of £75m, as shown in Table 2.2, was split between the Southern region (£60m) and Eastern region (£15m).

Leading indicators of efficient delivery

3.45 This section discusses the Southern region's preparedness for efficient delivery over the rest of CP6[31]. The underpinning analysis was undertaken before the significant recent impact of Covid-19. There will be disruption, particularly to renewals delivery and related efficiencies during the first six months of 2020-21. We will report on this in due course.

Renewals planning

3.46 South East, just before the start of year 2, was on target for renewals planning, however Wessex was 17 percentage points behind and is 24 percentage points below where it was at this stage last year.

3.47 The amount of renewals work is ramping up in year 2 of CP6 and it is important that Network Rail improve in this area. We do note however that 93 percent of renewals remits were issued to the supply chain by period 13 which is a good sign.

Securing engineering access to the railway

3.48 The Southern region has exceeded its own targets for securing engineering access and has booked all of its expected year 2 access. This is a good achievement and will minimise the disruption to the network from renewals work.

Maintenance capacity

3.49 Southern has a shortfall compared to its required maintenance headcount for 2020-21 (3 percent in South East, 8 percent in Wessex).

Efficiency planning

3.50 Network Rail at period 13 considered that 62 percent (by value) of the region's year 2 efficiencies were either delivered, with the benefits imminent or with project plans in place. This also means however that at period 13, at a late stage in the planning process, that circa 38 percent of Southern's efficiencies had no detailed plans in place.

3.51 As we reported in our December 2019 letters[32], we commissioned an independent reporter, Nichols, to review Network Rail's efficiency plans for year 1 and 2 of CP6[33]. Nichols reviewed the old South East and Wessex routes separately and found that there were common themes in both routes. They found a clear commitment to deliver efficiencies in CP6 with dedicated resources, clear ownership of plans and a good general culture of identifying and delivering efficiencies. However, capex efficiency plans were found to be in a poorer state than opex plans and in general some of the planning and

[31] This section is disaggregated by route rather than region. This is because some of the internal reorganisation from routes into regions as part of the PPF reorganisation have not yet been implemented.

[32] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment

[33] The South East report is here https://orr.gov.uk/__data/assets/pdf_file/0015/42126/south-east-route-report-review-of-network-rails-renewals-and-efficiency-planning-november-2019.pdf and the Wessex report here https://orr.gov.uk/__data/assets/pdf_file/0013/41602/interim-nichols-review-of-network-rails-renewals-and-efficiency-planning.pdf

documentation was found to be poor (e.g. capex plans not sufficiently mature, lacking the detail expected for initiatives of this size).

3.52 Since Nichols' work concluded, Southern has made further progress including strengthening resources and putting more robust programme-level oversight in place. However, substantially more still needs to be done, particularly in relation to the quality of renewals efficiency plans, as these are critical to delivering required renewals volumes and the increasing efficiency challenge in the later years of CP6. We will continue to monitor and report on Eastern's progress over the next year.

Wales & Western

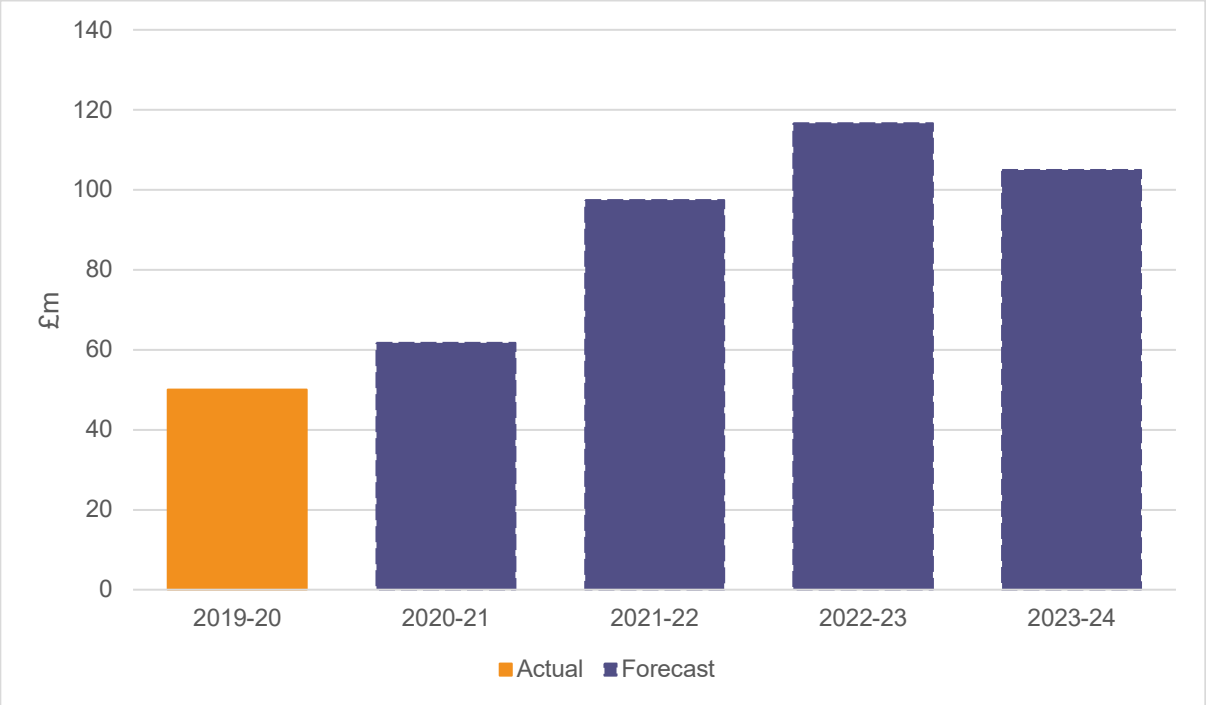
3.53 This section covers the recently formed Wales & Western region. We also provide a separate analysis for Network Rail's operations in Wales below.

Efficiency in 2019-20

3.54 Our PR18 determination concluded that Network Rail should improve its efficiency by 3.4 percent (£22m) in 2019-20 in the Western route and 4.6 percent (£16m) in the Wales and borders (Wales) route, combined this is now the Wales & Western region. This means that to deliver the same level of output, we expected Network Rail's costs in Wales & Western in 2019-20 to be 3.8 percent (£37m) lower than in 2018-19, the final year of CP5.

3.55 The Wales & Western region exceeded its delivery plan target of £42m for the year and delivered £50m of efficiency improvements. This forms part of Network Rail's plans to deliver £431m of efficiency in Wales & Western in CP6. Network Rail's delivery plan trajectory for Wales & Western is shown in Figure 3.8.

Figure 3.8 Wales & Western's actual and forecast efficiency in CP6



Source: Network Rail

3.56 Figure 3.9 shows the main initiatives that have contributed to Wales & Western's efficiency improvement in 2019-20. The two most significant initiatives were:

- *Early contractor involvement (£9.3m):* The largest efficiency initiative in 2019-20 was from early contractor involvement in year 1. This made up £9.3m of total year 1 efficiencies. Network Rail has explained that by sharing a forward plan of the renewals work that it intends to undertake earlier with its supply chain (through the issuance of remits), it was able to provide its supply chain more time to assist with the design of schemes and allocate resources more effectively. For example, during a complex bridge renewal at Basildon Skew underbridge, Wales and Western involved the supply chain earlier and established a different approach leading to cost savings. The total saving from this project contributed £1.4m of efficiency savings. Whilst this is a one-off saving for the project, Wales & Western will be able to take forward the learning to future bridge renewals.

- *Improved contracting strategies (£7.3m):* Wales & Western delivered £7.3m of efficiency from contracting strategies efficiencies. This came through putting framework contracts in place early in the control period and the tendering of packages of works to give the supply chain more certainty. For example, contracts for haulage trains that were due for renewal at the start of CP6 were given to multiple companies, where Network Rail previously relied on a smaller number of companies. Wales & Western reported that the rates were reduced by 30 percent delivering a £1.8m saving in year 1 of CP6. The region stated that this reduced rate will be in place throughout CP6, leading to future savings.

Figure 3.9 Wales & Western's main efficiency initiatives in 2019-20

Source: Network Rail

Financial Performance

3.57 As shown in Table 3.4, Wales & Western financially underperformed by £43m compared to delivery plan, largely due to underperformance of enhancements, which was offset by outperformance of Schedule 8 payments and support costs.

Table 3.4 Network Rail's financial performance in Wales & Western in 2019-20

£m, 2019-20 prices	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Network grant income	786	(90)	0
Franchised track access charges	391	3	7
Other single till income	556	475	3
Total income	**1,733**	**388**	**10**
Schedule 4	36	(5)	(6)
Schedule 8	(28)	29	29
Network operations	88	(5)	(5)
Support	107	53	32
Traction electricity, industry costs & rates	86	5	1
Maintenance	256	(7)	(12)
Total operating expenditure	***545***	***70***	***39***
Capex – Renewals	460	(4)	(5)
Capex – Enhancements	387	45	(87)
Total capital expenditure	***847***	***41***	***(92)***
Financing costs & other	*410*	*32*	-
Total expenditure	**1,802**	**143**	**(53)**
Financial performance measure (FPM)			**(43)**

Source: Network Rail's regulatory financial statements

Expenditure

3.58 Network Rail spent £1,802m in Wales & Western in 2019-20. Network Rail's expenditure in these categories is examined below.

Operating expenditure

Maintenance

3.59 Network Rail spent £256m maintaining the rail network in Wales & Western in 2019-20. Expenditure was broadly in line with its delivery plan for the year. However, Network Rail reported underperformance of £12m, which was attributed to the use of Schedule 8 benefits in passenger improvement activities, such as additional vegetation works.

Support costs

3.60 Support costs were £107m, £53m lower than the CP6 delivery plan, with financial outperformance of £32m. Support costs were lower than the CP6 delivery plan due to various savings and slower implementation of the Putting Passengers First (PPF)

reorganisation. The most significant savings include the settlement of property disputes and reductions in performance related pay for staff.

Network operations costs

3.61 Network operations costs were £88m in 2019-20, £5m higher than the delivery plan, and £5m of financial underperformance was recognised. This was slightly higher than planned in the delivery plan, due to additional expenditure on managed stations, passenger improvements and more signallers being recruited than expected in the delivery plan.

Schedules 4 & 8

3.62 Schedule 4 costs in Wales & Western were £36m in 2019-20, £5m higher than the delivery plan with £6m of financial underperformance recognised. Costs were higher than the delivery plan due to adverse weather, including the hot summer in 2019 and heavy rainfall in February 2020.

3.63 Schedule 8 costs outperformed by £29m compared to the CP6 delivery plan due to better than expected train performance.

Traction electricity, industry costs and rates

3.64 Total traction electricity, industry costs and rates were £86m. Traction electricity costs were £43m in Wales & Western. Traction electricity costs in the year were lower than the CP6 delivery plan. This was offset by reduced traction electricity income received from operators, as mentioned below.

3.65 Industry costs and rates in 2019-20 included business rates (£26m), British Transport Police costs (£10m), ORR licence fee and railway safety levy (£5m), and RSSB costs (£2m).

Renewals

3.66 £460m was spent on renewing the rail network in Wales & Western in 2019-20. Expenditure on renewals was broadly in line with the delivery plan, with slight financial underperformance for the work delivered.

Enhancements

3.67 Wales & Western spent £387m on enhancements, £45m lower than the CP6 delivery plan and there was financial underperformance of £87m. This is largely due to delays to Crossrail and GWEP. For more information, see the enhancements section of Chapter 2.

Income

3.68 Network Rail received £1,733m of income in Wales & Western in 2019-20. The majority of its income was from government network grants (£786m), £391m came from track and other access charges and £556m from OSTI.

3.69 OSTI was higher than the delivery plan because of the sale of the Core Valley Lines (CVL) to the Welsh Government for £470m, as discussed in paragraph 2.41 in Chapter 2.

Leading indicators of efficient delivery

3.70 This section provides an update on Wales & Western's preparations to deliver efficiently in 2020-21. The full impact of Covid-19 on Network Rail's activities in 2020-21 is not yet well understood. There will be continued disruption, particularly to renewals delivery and related efficiencies during the first six months of 2020-21. However, the network is also quieter than normal which presents opportunities to undertake additional work in some areas. We will report on this in due course.

Renewals planning

3.71 As leading indicators reporting has been done by route by Network Rail, this section will consider the Wales and Western routes separately.

3.72 Figure 3.3 above shows the percentage of renewals projects which have financial authorisation. For Wales, 46 percent of renewals projects for 2019-20 (by value) had completed detailed designs and had received financial authorisation for delivery. This was significantly below the 69 percent national average (23 percentage points) and fell short of its internal target by 42 percentage points. Authorisation of track work, which consists of 40 percent of the renewals work bank, is an issue for Wales. This is because track authorisations in March missed the reporting cut-off for 2019-20, which has contributed to the shortfall. Signalling and track approvals in April 2020-21 should increase Wales's authorisations up to 70 percent.

3.73 For Western, 59 percent of renewals projects for 2019-20 (by value) had completed detailed designs and had received financial authorisation for delivery. This was also below the 69 percent national average (10 percentage points) and fell short of its internal target by 41 percentage points. Track authorisations are also a significant issue for Western with approvals delayed due to concerns about high costs.

3.74 Financial authorisation only provides a partial picture of renewals workbank planning. Remits issued and accepted by the supply chain shows progress made at an earlier stage of the planning lifecycle. Wales has issued, and its supply chain accepted 77 percent of planned renewals in 2020-21 and Western 92 percent. We consider that both Wales and Western have made progress in developing its 2020-21 renewals workbank, however, not as much as we would have expected by the start of the year. Putting aside the impact of Covid-19, this represents a risk to the efficient delivery of renewals in Wales and Western in 2020-21.

Securing engineering access to the railway

3.75 Wales underperformed against its internal target for booking disruptive access to the network for planned engineering work in 2020-21 by 12 percentage points. Western also slightly underperformed, by 2 percentage points.

Maintenance capacity

3.76 Figure 3.5 above helps us understand whether Wales & Western achieved its internal target for booking disruptive access to the network for planned engineering work in 2020-

21. Both routes have a shortfall (Wales 9 percent and Western 7 percent) compared to their required maintenance headcount for 2020-21. In Wales, Network Rail has attributed the shortfall to reporting problems following the divestment of the CVL and the transfer of maintenance staff not being reflected in the target.

Efficiency planning

3.77 As shown in Table 3.2, Network Rail considers that for Wales 88 percent and for Western 79 percent of 2020-21 target efficiency (by value) will be achieved from projects that have already been delivered and are waiting for benefits to be realised, or have clear project plans in place. However, the impact of Covid-19 on these continues to remain unclear. As we reported in our December 2019 letters[34], we commissioned an independent reporter, Nichols, to review Network Rail's efficiency plans for years 1 and 2 of CP6[35]. Nichols found that there is clear ownership within Wales and Western of the business changes that are required to deliver required efficiency improvements. However, Nichols considered that there is a variable quality of documentation of how forecast efficiencies have been calculated, and how efficiencies will be delivered.

3.78 Since Nichols' work concluded, Wales & Western has made further progress including strengthening resources and more robust programme-level oversight. However, as noted in the efficiency section above, substantially more still needs to be done, particularly in relation to the quality of renewals efficiency plans, as these are important to delivering required renewals volumes and the increasing efficiency challenge in later years of CP6.

Eastern

Efficiency in 2019-20

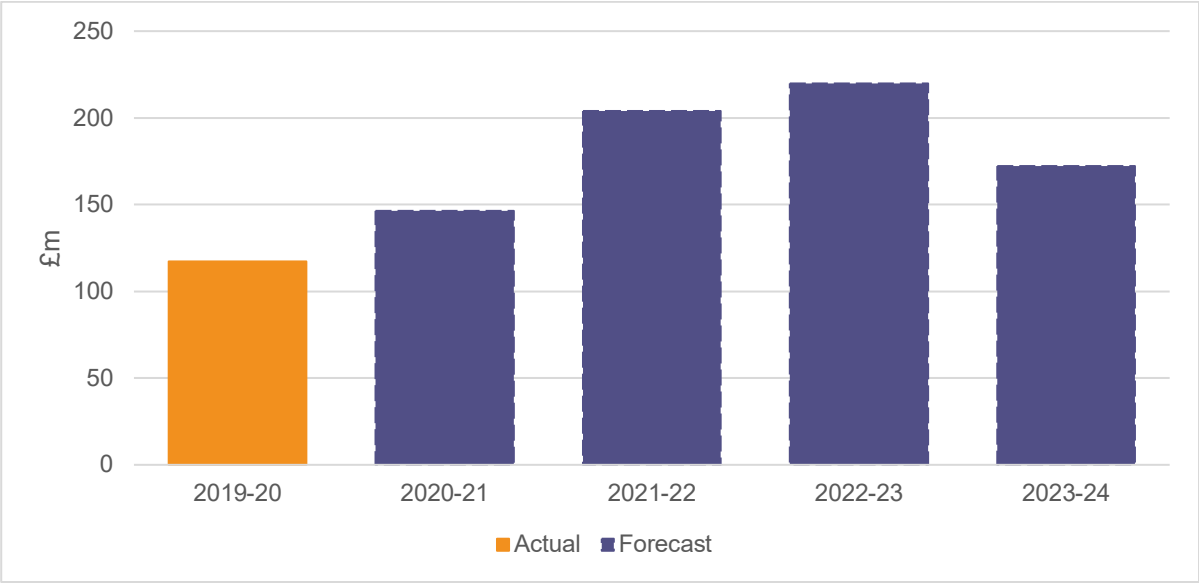
3.79 Our PR18 determination concluded that Anglia should improve its efficiency by 8.6 percent (£45m) and LNEEM by 4.6 percent (£63m) in 2019-20. These two routes now make up the Eastern region, so overall we expected costs in the Eastern region in 2019-20 to be 5.7 percent (£108m) lower than in 2018-19.

3.80 Eastern delivered £117m of efficiency improvements in 2019-20, which is £16m higher than the £101m in its delivery plan at the start of the year. This forms part of Eastern's plans to deliver £859m of efficiencies in CP6. Network Rail's delivery plan trajectory for Eastern is shown in Figure 3.10.

[34] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment

[35] See https://orr.gov.uk/__data/assets/pdf_file/0020/42176/network-rails-preparations-to-deliver-efficiently-in-CP6-GB.pdf

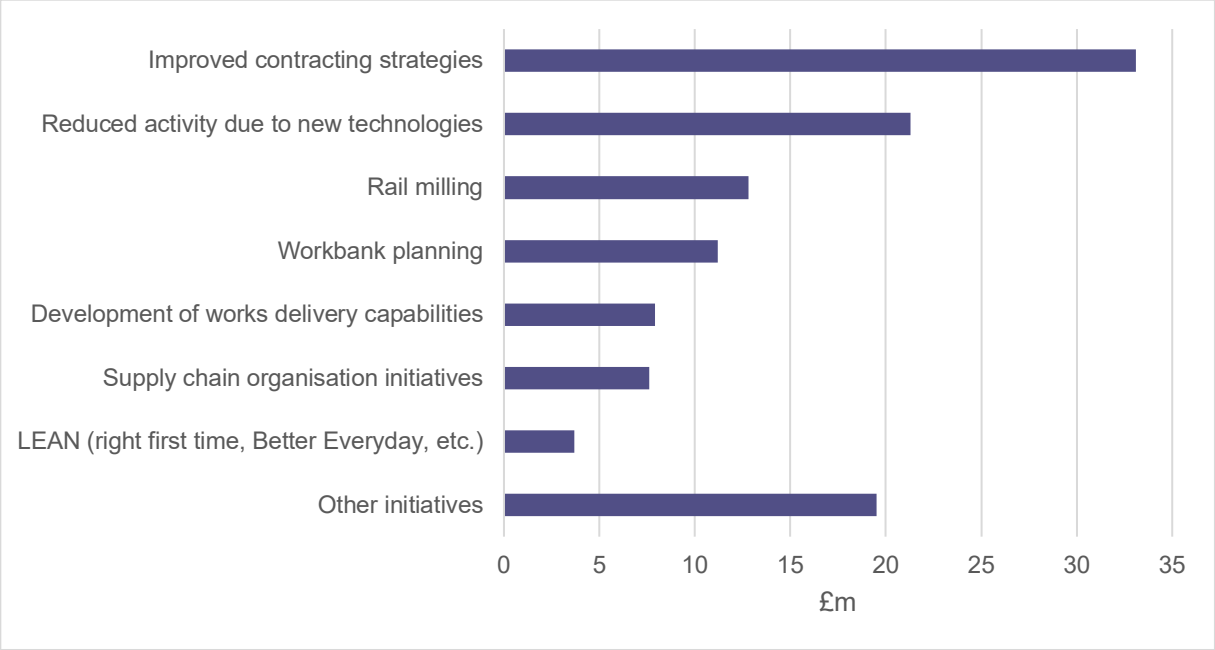
Figure 3.10 Eastern's actual and forecast efficiency in CP6



Source: Network Rail

3.81 Figure 3.11 shows the main initiatives that have contributed to Eastern's efficiency improvement in 2019-20.

Figure 3.11 Eastern's main efficiency initiatives in 2019-20



Source: Network Rail

3.82 These efficiencies cover a wide range of activities, broadly grouped into the following themes, reducing the amount of work required (scope reduction), improving delivery, improving commercial relations with the supply chain and technological solutions. The main initiatives are:

- *Improved contracting strategies (£33.1m):* this is largely driven by contracts for signalling work, in particular in the Durham Coast re-signalling project, works at

Kings Cross, and West Hampstead. Costs were reduced because of better rates from the supply chain through the Major Signalling Renewals Framework (MASREF) contract, working more efficiently by combining projects, doing more in-house work through the works delivery team and delivering more efficient working practices (e.g. development of a 'signalling toolkit' to generate efficiencies).

- *Reducing activities by using new technologies (£21.3m)*: this covers a range of new technologies, such as 'decision support tools' or (DSTs), which make better use of data to target work better, which can help to stop unnecessary work.
- *Development of works capabilities (£7.9m):* the region has been developing its own internal works delivery team. Works delivery is a department within the region which can undertake work on the network, often smaller, less complicated jobs. Improving what these teams can do can lead to savings because the in-house team can be cheaper than bringing in contractors.
- *Rail milling (£13m):* this a technique where a specially equipped train travels over a damaged piece of track, removing the damage and extending the life of the asset, which reduces costs.

Financial performance

3.83 As shown in Table 3.5, Eastern financially underperformed by £28m compared to the delivery plan. This was largely driven by underperformance on enhancements and maintenance partly offset by the effect of better than expected train performance and delivery of efficiencies.

Table 3.5 Network Rail's financial performance in 2019-20, Eastern

£m, 2019-20 prices	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Network grant income	1,639	(214)	-
Franchised track access charges	645	(24)	(3)
Other single till income	154	(13)	(13)
Total income	**2,438**	**(251)**	**(15)**
Schedule 4	109	(11)	8
Schedule 8	28	11	11
Network operations	200	10	10
Support	181	53	22
Traction electricity, industry costs & rates	245	16	1
Maintenance	512	(8)	(14)
Total operating expenditure	***1,275***	***71***	***38***
Capex – Renewals	851	(1)	(8)
Capex – Enhancements	800	(36)	(42)
Total capital expenditure	***1,651***	***(37)***	***(50)***
Financing costs & other	561	53	-
Total expenditure	**3,487**	**87**	**(12)**
Financial performance measure (FPM)			**(28)**

Source: Network Rail's regulatory financial statements

Expenditure

3.84 Eastern's total costs were £3,487m in 2019-20, £87m lower than expected in the region's delivery plan for the year. Expenditure in each of the different categories in Table 3.5 is examined below.

Operating expenditure

Maintenance

3.85 £512m was spent on maintenance, £8m more than expected and £14m of financial underperformance has been recognised. Higher than expected costs were largely because of unexpected weather incidents, with a hotter than expected summer in 2019 and floods in February 2020 which resulted in higher reactive maintenance costs, in particular in signalling.

Support costs

3.86 There were £181m of support costs, of which the regions own support team cost £47m, with an additional £134m allocated to Eastern from other parts of Network Rail's support services. Overall, Eastern outperformed in this area by £22m, but there was underperformance in Eastern's own support team of £9m. The underperformance in the regional team was largely due to higher than expected costs for the PPF transformation programme. There were also some higher than expected staff training costs.

Network operations costs

3.87 Network operations costs were £200m in Eastern, £10m lower than its delivery plan, with £10m of financial outperformance. The underspend against the delivery plan was largely because of lower than planned recruitment of signallers.

Schedules 4 & 8

3.88 Schedules 4&8 costs were £137m, largely in line with the delivery plan, and £19m of financial outperformance has been reported in this area. This is largely because of better performance by Network Rail, which resulted in lower payments to train operators and unanticipated Schedule 8 receipts.

Traction electricity, industry costs and rates

3.89 Eastern incurred costs of £245m in the year for traction electricity, industry costs and rates. Traction electricity costs were £126m, and were £17m lower than the delivery plan due to reduced market prices for electricity. This was offset by reduced traction electricity income received from train operators, as mentioned below.

3.90 Industry costs and rates in 2019-20 included business rates (£81m), British Transport Police costs (£28m), ORR licence fee and railway safety levy (£5m), and RSSB costs (£3m). These costs were broadly in line with the delivery plan.

Renewals

3.91 £851m was spent in the Eastern region (largely in line with the delivery plan), of which £731m was managed by the region and £120m by the national functions of Network Rail. £8m of financial underperformance was reported, which was largely caused by higher than expected costs for electrical power and fixed plant assets. Costs were higher in this area for a number of reasons: restricted access which reduced productivity, higher than expected delivery costs in some areas (e.g. Thameside works where wildlife considerations meant that costs increased), and a less competitive supply chain as a result of a company exiting the market.

Enhancements

3.92 £800m was spent on enhancements by the Eastern region compared to a delivery plan of £764m and £42m of financial underperformance was recognised. The biggest projects were the Midland Main Line programme (£281m of expenditure), East Coast Main Line enhancements programme (£185m) and the Trans Pennine route upgrade (£182m). The underperformance was caused by cost overruns on Crossrail (£43m of underperformance)[36], for more information on these enhancements see Chapter 2.

Income

3.93 Total income for Eastern was £2,438m. Total financial underperformance was £16m, largely because of £12m of lower property sales than expected.

[36] Total underperformance on Crossrail was £76m, as shown in Table 2.2, of which £43m underperformance was allocated to the Eastern region.

Leading indicators of efficient delivery

3.94 This section discusses the Eastern region's preparedness for efficient delivery over the rest of CP6[37]. The underpinning analysis was undertaken before the significant recent impact of Covid-19. There will be disruption, particularly to renewals delivery and related efficiencies during the first six months of 2020-21. We will report on this in due course.

Renewals planning

3.95 As explained in Chapter 2, effective renewals planning is important because it improves the robustness of the rail network and provides a stable profile of work for Network Rail's supply chain. Figure 3.3 above shows the percentage of renewals projects which have financial authorisation and, whilst LNEEM is close to meeting its target (8 percentage points behind target), Anglia is significantly behind where we would it expect it to be at this late stage in the planning process (15 percentage points behind target).

3.96 Network Rail has said that delays have occurred because of increased scrutiny of costs by the region's investment panel.

Securing engineering access to the railway

3.97 Figure 3.4 above helps us understand whether Eastern achieved its internal target for booking disruptive access to the network for planned engineering work in 2020-21. Anglia has missed this target, booking only 51 percent of required access by March 2020, LNEEM is much closer to target with 87 percent of required access booked. Eastern has said that the Anglia targets were not aligned to the year 2 renewals workbank and were set too high. We expect that this will be corrected in future.

Maintenance capacity

3.98 Figure 3.5 above shows the progress made in recruiting the required amount of maintenance staff. Eastern has largely achieved its targets for recruiting staff with Anglia recruiting 93 percent of required headcount and LNEEM 104 percent, exceeding the target.

Efficiency planning

3.99 Table 3.2 above shows the maturity of efficiency plans for the 2020-21 financial year. Network Rail considers that 78 percent of the 2020-21 target efficiencies for Anglia and 90 percent of the efficiencies for LNEEM will be achieved from projects that have already been delivered and are waiting for benefits to be realised, or have clear project plans in place. That also means that 22 percent of Anglia's and 10 percent of LNEEM's 2020-21 target efficiencies have no clear project plans, or plans are in place but there is low confidence in delivery.

[37] This section is disaggregated by route rather than region. This is because some of the internal reorganisation from routes into regions as part of PPF reorganisation have not yet been implemented.

3.100 As we reported in our December 2019 letters[38], we commissioned an independent reporter, Nichols, to review Network Rail's efficiency plans for years 1 and 2 of CP6[39]. Nichols found that there was clear ownership within the Eastern region of the business changes that are required to deliver required efficiency improvements. However, Nichols considered that there was variable quality of documentation of how forecast efficiencies have been calculated, and will be delivered.

3.101 Since Nichols' work concluded, Eastern has made further progress including the strengthening of resources and putting more robust programme-level oversight in place. However, substantially more still needs to be done, particularly in relation to the quality of renewals efficiency plans, as these are important to delivering required renewals volumes and the increasing efficiency challenge in the later years of CP6. We will continue to monitor and report on Eastern's progress over the next year.

North West & Central

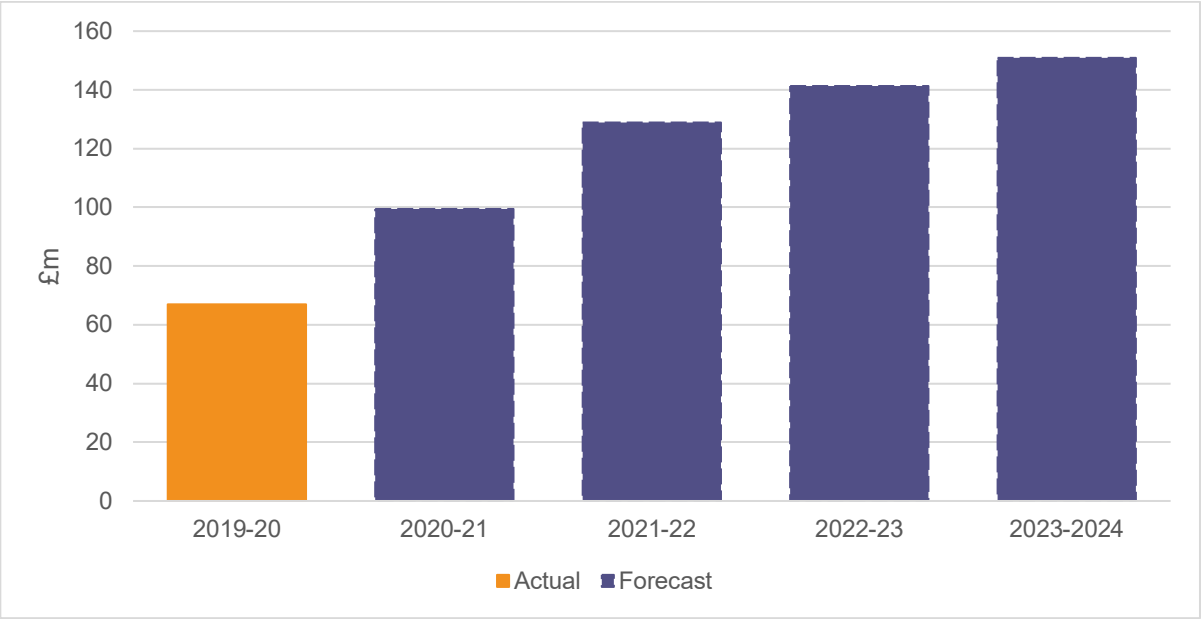
Efficiency in 2019-20

3.102 Our PR18 determination concluded that Network Rail should improve its efficiency by 5.4 percent (£74m) in 2019-20 on the London North Western (LNW) route, which is now the North West & Central region. This means that to deliver the same level of output, we expected Network Rail's costs in North West & Central in 2019-20 to be £74m lower than in 2018-19, the final year of CP5. This improvement forms part of Network Rail's plans to deliver £588m of efficiency in North West & Central in CP6. Network Rail's delivery plan trajectory is shown in Figure 3.12.

[38] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment

[39] See https://orr.gov.uk/__data/assets/pdf_file/0020/42176/network-rails-preparations-to-deliver-efficiently-in-CP6-GB.pdf

Figure 3.12 North West & Central's actual and forecast efficiency in CP6



Source: Network Rail

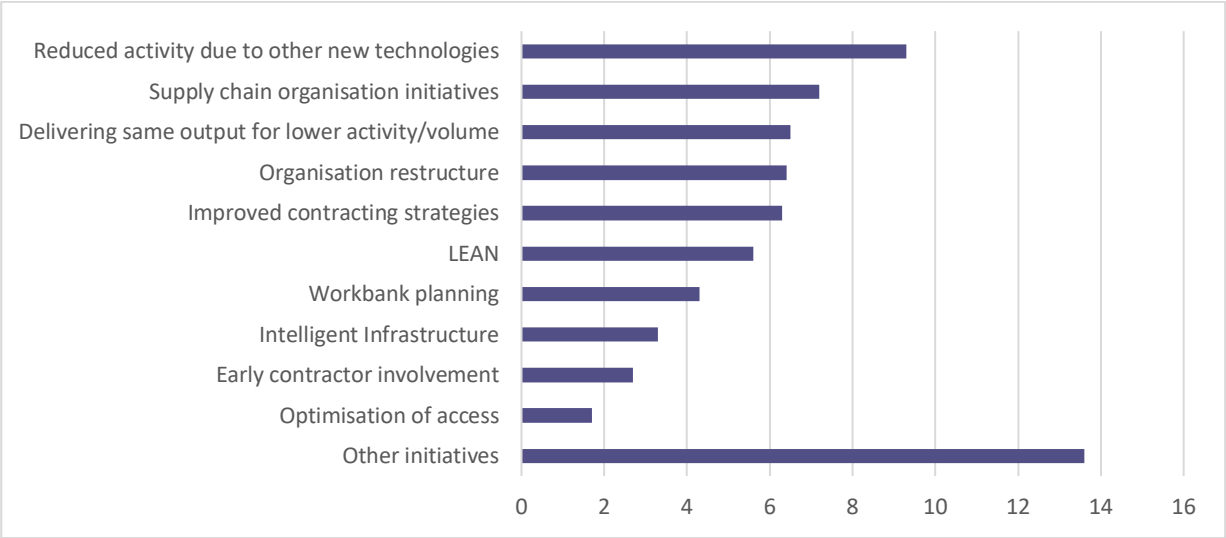
3.103 In 2019-20, Network Rail fell short of its delivery plan efficiency target, delivering £67m of efficiencies against a target of £69m. It remains on target for achieving efficiencies of £588m over CP6.

3.104 Figure 3.13 shows the main initiatives that have contributed to North West & Central's efficiency improvement in 2019-20. The two most significant initiatives were:

- *Reduced activity due to other new technologies (£9.3m)*: The largest efficiency initiative in 2019-20 was from reduced activity due to other new technologies, making up £9.3m of total year 1 efficiencies. The largest contribution to this, providing approximately £7.9m of efficiencies in year 1 of CP6, was in the use of predictive tools. These assess the need for track renewals, allowing Network Rail to focus its approach to renewals on asset performance and condition, rather than just planning renewals based on simple key performance indicators assessing the age and profile of each asset.

- *Supply chain organisation initiatives (£7.2m)*: Supply chain organisation initiatives delivered £7.2m of efficiencies in 2019-20. A key contributor to this total was the retendering of a supply chain operations contract for seasonal treatment works, including clearing and treating damage from excess leaves falling onto tracks and applying anti-freeze to the third rail. North West & Central negotiated a lower rate for this contract and therefore made significant savings in year 1, which will also be realised in later years of CP6.

Figure 3.13 North West & Central's main efficiency initiatives in 2019-20



Source: *Network Rail*

Financial performance

3.105 As shown in Table 3.6, North West & Central financially outperformed by £10m compared to its delivery plan, with significant underperformance in Schedule 8 income more than offset by outperformance in support costs, Schedule 4 payments and enhancements in the year.

Table 3.6 North West & Central's financial performance in 2019-20

£m, 2019-20 prices	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Network grant income	1,083	(134)	-
Franchised track access charges	560	(10)	2
Other single till income	125	(3)	(3)
Total income	**1,768**	**(147)**	**(1)**
Schedule 4	62	28	17
Schedule 8	74	(44)	(44)
Network operations	140	(3)	(5)
Support	151	60	33
Traction electricity, industry costs & rates	164	11	(1)
Maintenance	425	(9)	(5)
Total operating expenditure	***1,016***	***43***	***(5)***
Capex – Renewals	556	33	(6)
Capex – Enhancements	224	56	22
Total capital expenditure	***780***	***89***	***16***
Financing costs & other	447	40	-
Total expenditure	**2,243**	**172**	**11**
Financial performance measure (FPM)			**10**

Source: Network Rail's regulatory financial statements

Expenditure

3.106 Network Rail spent £2,243m in North West & Central in 2019-20. Expenditure in each of the different categories in Table 3.6 is examined below.

Operating expenditure

Maintenance

3.107 Network Rail spent £425m maintaining the rail network in 2019-20. This spend was higher than the planned spend for the year by £9m, with £5m of underperformance recognised. The additional spend and underperformance was mainly due to changes in stock values and increased costs of materials, offset by outperformance which Network Rail attributes to greater than expected efficiencies on contract negotiations.

Support costs

3.108 Support costs were £151m. Network Rail spent £60m less than its delivery plan and recognised financial outperformance of £33m. The outperformance was driven by a number of factors, including reductions in performance-related pay and lower than planned headcount, with slow implementation of the PPF reorganisation program also contributing to the underspend.

Network operations costs

3.109 Network Rail spent £140m on network operations in North West & Central in 2019-20. This was slightly higher than expected in the delivery plan, which is attributable to increased expenditure on programs to improve train performance in response to North West & Central falling short of train performance targets in year 1 (see Schedule 8 commentary below).

Schedules 4 & 8

3.110 Schedule 4 costs in North West & Central were £62m in 2019-20, £28m lower than the delivery plan, with £17m of outperformance. Schedule 4 costs outperformed due to co-ordinating planned activities better to require fewer disruptive possessions in the year. The outperformance is from the centrally held contingency for extreme weather events which was not required in the year in North West & Central.

3.111 Schedule 8 costs in North West & Central were £74m in 2019-20, £44m worse than the delivery plan and delivering equivalent underperformance. Train performance in the year was worse than expected due to higher numbers of one-off incidents, for example high numbers of trespasses and suicides, repeated damage to overhead lines, issues with the May 2019 timetable and adverse weather in the region. The region has spent money on additional performance schemes in the year (see Operations expenditure above) to provide additional resources to assist train performance at strategically important points of the network.

Traction electricity, industry costs and rates

3.112 The total costs for traction electricity, industry costs and rates was £164m for North West & Central in 2019-20. This includes traction electricity costs of £82m, which was lower

than Network Rail's delivery plan, which was offset by lower electricity income received from train operators.

3.113 Industry costs and rates in 2019-20 included business rates (£55m), British Transport Police costs (£21m), ORR licence fee and railway safety levy (£2m), and RSSB costs (£3m).

Renewals

3.114 Network Rail spent £556m renewing the rail network in the North West & Central region in 2019-20. It spent £33m less than its own delivery plan, which is because of underspend in signalling works due to delays in large programs, such as around Birmingham New Street. These delays were also a factor in the financial underperformance recognised in the year as the fixed costs of the signalling team were spread over fewer pieces of project work. Financial underperformance has also been reported on buildings, in particular due to overspend on the design phases of certain projects and unanticipated additional spend following the discovery of asbestos at Tamworth station. This regionally managed underperformance was partly offset by outperformance in centrally-managed risk funding.

Enhancements

3.115 £224m was spent on North West & Central region enhancements in the year, £56m lower than planned. £22m of outperformance was recognised from risks not materialising as expected and contingency funding not being used. East West Rail Phase 2 was the largest project in the region, with a spend of £92m. For more information on this enhancement, see Chapter 2.

Income

3.116 Network Rail received £1,768m of income in the North West & Central region in 2019-20. The majority of its income was from network grant income (£1,083m), with £560m from franchised track access charges and £125m from OSTI.

3.117 Network Rail spent less on net operating costs and renewals during the year, leading to £134m of lower network grant funding being needed compared to the CP6 assumptions.

Leading indicators of efficient delivery

3.118 This section provides an update on North West & Central's preparations to deliver efficiently in 2020-21. The full impact of Covid-19 on Network Rail's activities in 2020-21 is not yet well understood. There will be continued disruption, particularly to renewals delivery and related efficiencies during the first six months of 2020-21. However, the network is also quieter than normal, which presents opportunities to undertake additional work in some areas. We will report on this in due course.

Renewals planning

3.119 As explained in Chapter 2, effective renewals planning is important because it improves the robustness of the rail network and provides a stable profile of work for Network Rail's supply chain. As leading indicators data has been reported by route by Network Rail, this

section will refer to London North Western (LNW), which is now the region North West & Central. For LNW, 73 percent of renewals projects for 2019-20 (by value) had completed detailed designs and had received financial authorisation for delivery. LNW was four percentage points above the 69 percent national average.

3.120 Financial authorisation only provides a partial picture of renewals workbank planning while remits issued and accepted by the supply chain shows progress made at an earlier stage of the planning lifecycle. LNW has issued, and its supply chain accepted, only 57 percent of planned renewals in 2020-21. Whilst this is significantly below other routes, LNW remains confident that the renewals remit status is improving and better than reported. We consider that LNW could make more progress in developing its 2020-21 renewals workbank. This represents a risk to the efficient delivery of renewals in LNW in 2020-21.

Securing engineering access to the railway

3.121 LNW improved by 10 percentage points in the last period of the year, but it still significantly unperformed against its internal target for booking disruptive access to the network for planned engineering work in 2020-21. It achieved only 65 percent of disruptive possessions booked. LNW reporting is impacted by large possessions in year 1 that have not been repeated in year 2 but were factored into the estimated target for year 2. We expect that this will be corrected in future.

Maintenance capacity

3.122 LNW has a small (1 percent) shortfall compared to its required maintenance headcount for 2020-21.

Efficiency planning

3.123 As shown in Table 3.2 above, Network Rail considers that nearly 50 percent of 2020-21 target efficiency will be achieved from projects that have already been delivered and are waiting for benefits to be realised, or have clear project plans in place. However, that means that over half of the 2020-21 target efficiencies have no clear project plans, or plans are in place but there is low confidence in delivery. Network Rail has attributed this to cautious reporting of efficiencies and are confident that the efficiency targets for year 2 can be met.

3.124 LNW is reporting that 46 percent of 2021-22 efficiencies are delivered and waiting to be realised or have plans in place. Overall the readiness metrics for LNW in year 3 are all above or consistent with Network Rail's current glidepath, however the impact of Covid-19 on these is unclear.

3.125 As we reported in our December 2019 letters[40], we commissioned an independent reporter, Nichols, to review Network Rail's efficiency plans for years 1 and 2 of CP6[41].

[40] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment

[41] See https://orr.gov.uk/__data/assets/pdf_file/0020/42176/network-rails-preparations-to-deliver-efficiently-in-CP6-GB.pdf

Nichols found that there was clear ownership within LNW of the business changes that are required to deliver required efficiency improvements. However, Nichols considered that there was variable quality of documentation of how forecast efficiencies have been calculated, and will be delivered.

3.126 Since Nichols' work concluded, LNW has made further progress including the strengthening of resources and more robust programme-level oversight, and work continues to improve the quality of the efficiency plans. However, substantially more still needs to be done, particularly in relation to the quality of renewals efficiency plans, as these are important to delivering the required renewals volumes and the increasing efficiency challenge in the later years of CP6.

National functions

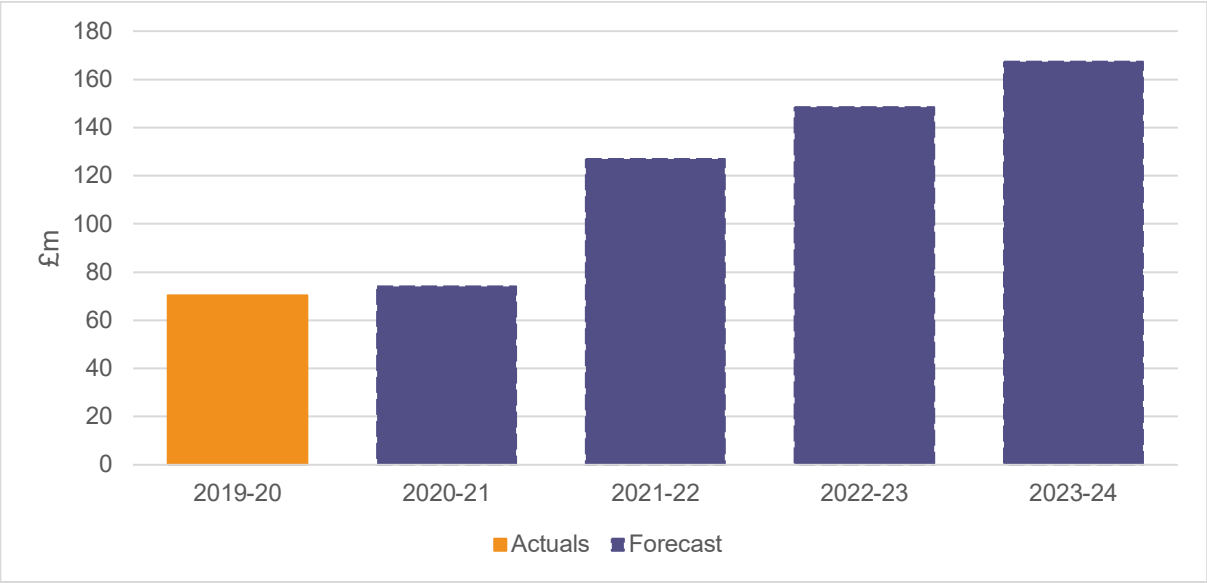
3.127 This section covers the efficiency, financial performance, income and expenditure for Network Rail's national functions. These functions include corporate services; network services; property; route services; and safety, technical & engineering. The cost of these functions is usually referred to as centrally-managed expenditure and is allocated to regions in proportion to their use of each of these functions. Centrally-managed expenditure made up 37 percent of Network Rail's total expenditure in 2019-20.

3.128 PPF has devolved a number of previously centralised services and functions to increase localised decision making. A new network services directorate has replaced the previous Freight and National Passenger Operators (FNPO) and Route Business Centre. This new directorate co-ordinates national activities such as freight, incident management, security and performance.

Efficiency

3.129 In response to our PR18 determination, Network Rail developed plans to deliver £587m of efficiency in its national functions in CP6. Network Rail's delivery plan trajectory is shown in Figure 3.14.

Figure 3.14 National functions' actual and forecast efficiency in CP6

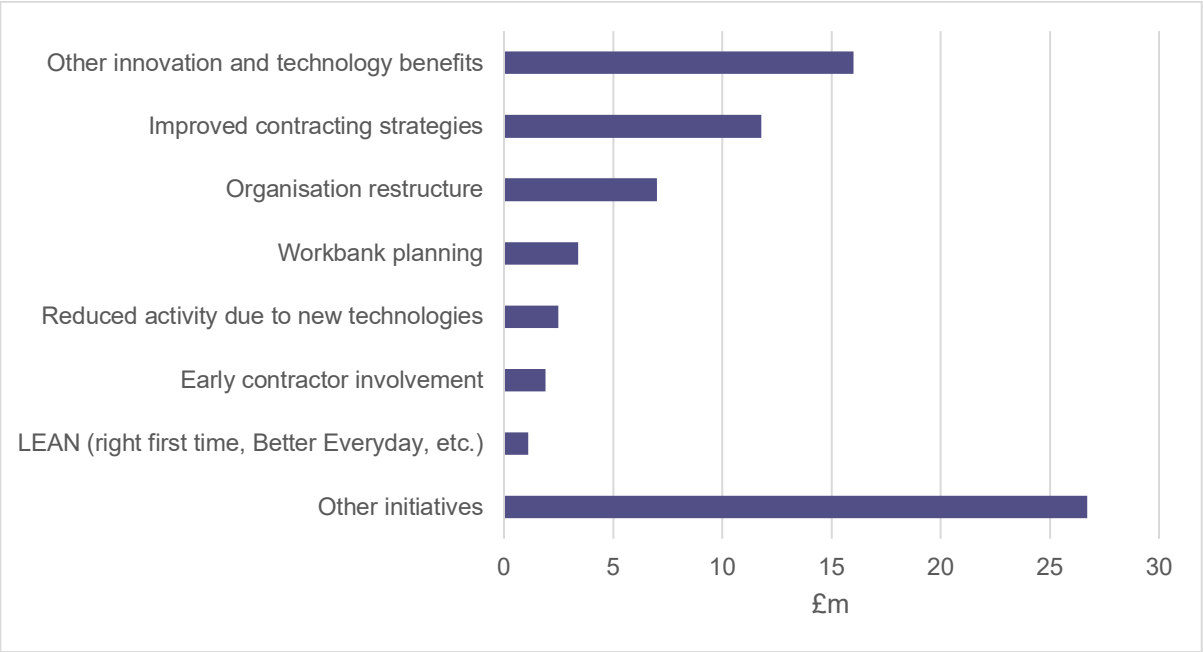


Source: Network Rail

3.130 National functions exceeded their delivery plan efficiency targets for the year, delivering £70m of efficiencies against a target of £51m. As shown in Figure 3.15, the main initiatives that have contributed to this were:

- *Other innovation and technology benefits (£16m):* This covers a range of new technologies including bringing a training modernisation programme in-house, rather than using external consultants, and increasing the capability and flexibility of the IT directorate. Other efficiencies include savings made on Network Rail's apprenticeship programme by increasing recoveries under the apprenticeship levy and closely managing costs to reduce the programme's cost per head.
- *Improved contracting strategies (£12m):* This includes renegotiating centrally-managed contracts and securing better terms or rates. This includes contracts across various types of work, mostly based on new CP6 framework agreements.

Figure 3.15 National functions' main efficiency initiatives in 2019-20



Source: Network Rail

Financial Performance

3.131 The costs incurred by Network Rail's national functions are allocated to each of the five regions. This section describes the performance of those functions and provides an analysis of the costs as a whole and their allocation to regions.

3.132 As shown in Table 3.7, FPM was £212m ahead of the delivery plan, mostly due to outperformance in support costs and Schedule 4 costs.

Table 3.7 Network Rail's centrally-managed expenditure in 2019-20

£m, 2019-20 prices	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Network grant income	5,260	(627)	-
Franchised track access charges	549	(58)	-
Other single till income	786	487	11
Total centrally-managed income	**6,595**	**(198)**	**11**
Schedule 4	(14)	65	64
Schedule 8	9	1	1
Network operations	20	7	4
Support	450	202	88
Traction electricity, industry costs & rates	795	60	3
Maintenance	74	-	(25)
Total operating expenditure	***1,334***	***335***	***135***
Capex – Renewals	440	116	26
Capex – Enhancements	191	(141)	40
Total capital expenditure	***631***	***(25)***	***66***
Financing costs & other	2,105	173	-
Total centrally-managed expenditure	**4,070**	**483**	**201**
Financial Performance Measure (FPM)			**212**

Source: Network Rail's regulatory financial statements

Expenditure

3.133 Network Rail spent £4,070m on centrally-managed functions in 2019-20. Expenditure in each of the different categories in Table 3.7 is examined below.

Operating expenditure

Maintenance

3.134 Network Rail's national functions spent £74m maintaining the rail network in 2019-20, consistent with its delivery plan but generating a £25m underperformance. This related to route services costs, which incurred higher supplier costs than anticipated, and a write down of some stock values during the year.

Support costs

3.135 Support costs of £450m in the year were significantly (£202m) lower than Network Rail's delivery plan, generating £88m of financial outperformance. The financial outperformance was because of savings in staff costs, with the slower-than-anticipated roll out of some PPF initiatives also reducing the spend in the year.

Network operations costs

3.136 Network Rail spent £20m on centrally-managed operations in 2019-20, £7m lower than anticipated. This was partly due to slow spending on the Performance Innovation Fund which is not progressing as quickly as anticipated. The fund is discussed further in Chapter 2.

Schedules 4 & 8

3.137 There was £14m of Schedule 4 income in 2019-20, compared to a £51m anticipated cost, generating £64m of financial outperformance. This improvement against the delivery plan for the year was due to the favourable settlement of commercial claims and the contingency for adverse weather not being fully utilised in the year.

3.138 The central element of Schedule 8 costs was £9m in 2019-20, £1m lower than the delivery plan.

Traction electricity, industry costs and rates

3.139 £795m of traction electricity, industry costs and rates was managed centrally in 2019-20. This includes traction electricity costs of £441m, £61m lower than Network Rail's delivery plan, which was offset by lower electricity income received from train operators.

3.140 Industry costs and rates in 2019-20 included business rates (£228m), British Transport Police costs (£91m), ORR licence fee and railway safety levy (£20m), and RSSB costs (£11m).

Renewals

3.141 Network Rail spent £440m of centrally-managed funding on renewing the rail network in 2019-20. It spent £116m less than its delivery plan and recognised £26m of outperformance in FPM. The main underspends were in safety, technical & engineering renewals and wheeled plant and machinery, most of which is treated as neutral for FPM. The outperformance includes lower than expected spend in a self-insurance fund for civils renewals across the network.

Enhancements

3.142 The financial outperformance recognised in the year was largely due to risks not materialising as expected and contingency funding not being used. The spend incurred in the year related to increased possession costs incurred due to previous late publication of timetables.

Income

3.143 Network Rail received £6,595m of centrally-managed income in 2019-20. The majority of this income was from network grant income (£5,260m), with £549m from franchised track access charges and £786m from OSTI.

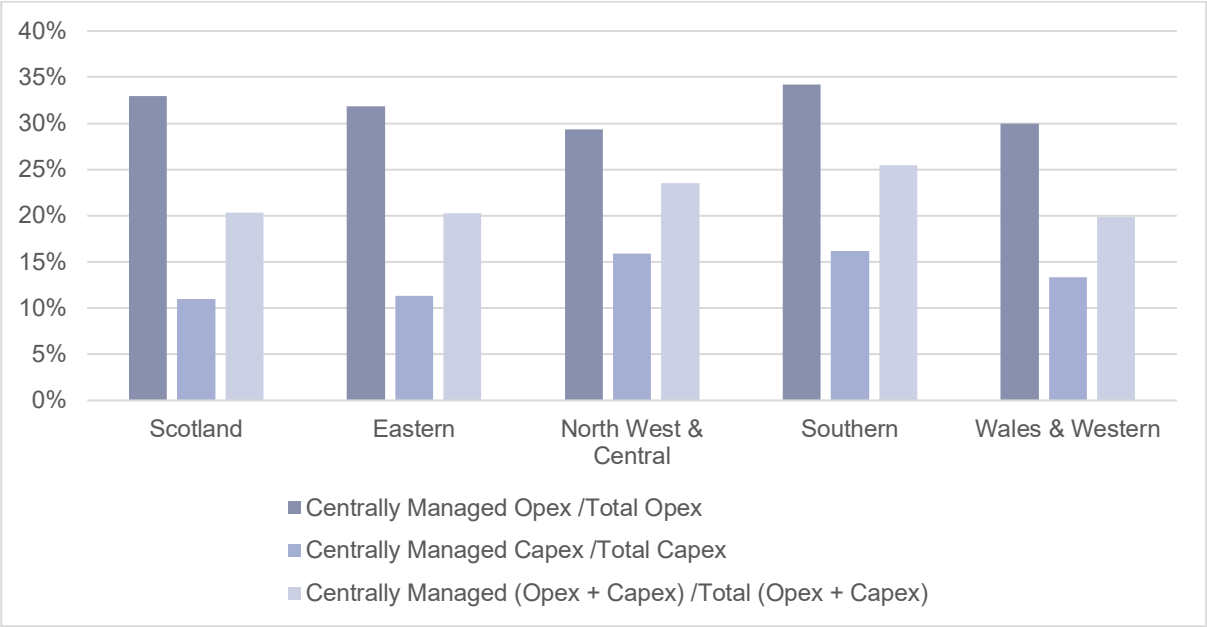
3.144 Network Rail spent less on net operating costs and renewals during the year, leading to lower network grant funding compared to the delivery plan. Network Rail also generated property income of £470m from the divestment of the CVL to Transport for Wales, which

was not included in the plan. This transaction did not affect financial performance for the year.

Allocation of costs to regions

3.145 Costs incurred by the national functions are allocated to Network Rail's five regions in proportion to their use of these functions and in accordance with our regulatory accounting guidelines. Figure 3.16 shows these costs as a portion of the expenditure of each region.

Figure 3.16 Centrally-managed costs as a proportion of total costs in 2019-20



Source: ORR analysis of Network Rail's regulatory financial statements

3.146 Figure 3.16 shows the proportion of centrally-managed costs in the year as a percentage of total expenditure by region, excluding finance costs as these are wholly centrally-managed and funded by the Department for Transport (DfT). The proportion of total expenditure managed by national functions was similar across all regions, with centrally-managed expenditure remaining between 20 percent and 25 percent for all regions.

Wales

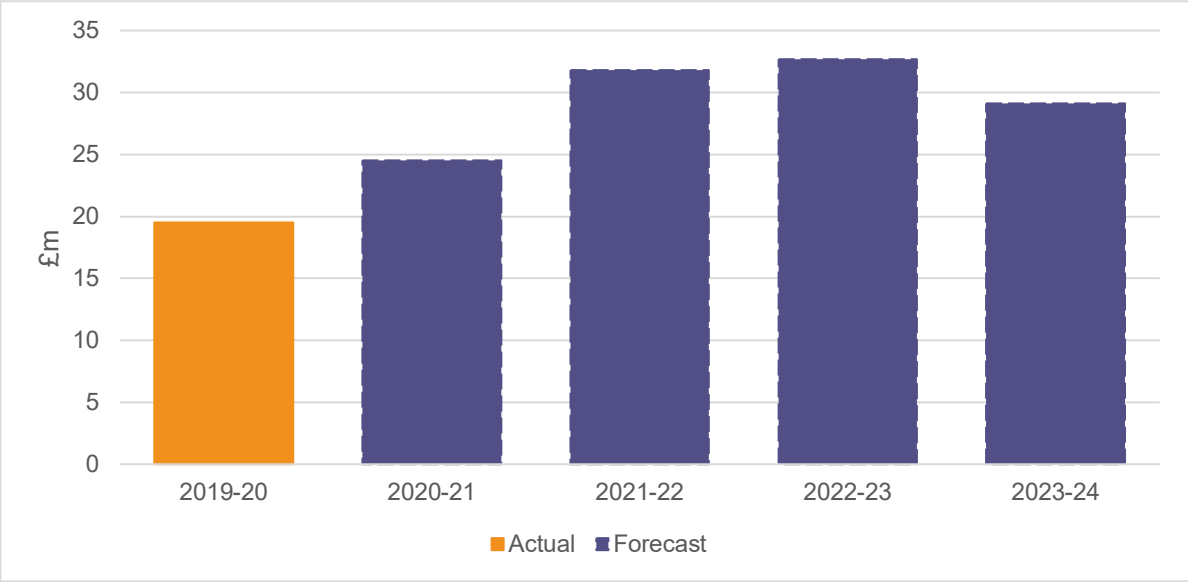
3.147 This section provides a summary of the efficiency and financial performance of Network Rail in Wales in 2019-20.

3.148 As explained in Chapter 1, Network Rail reorganised its eight geographical routes into five regions during the year. Following this reorganisation, the Wales route now forms part of the Wales & Western region (see above). Network Rail also sold part of its network in Wales (the Core Valley Lines, CVL), to the Welsh Government in March 2020. Transport for Wales now owns the CVL, which Amey Keolis Infrastructure manages on its behalf. The sale resulted in £470m of property sales income and an equal and offsetting £470m deduction from Network Rail's regulatory asset base (RAB). It also changes Network Rail's financial settlement for the remainder of CP6 as it will not need as much funding for Wales.

3.149 Our PR18 determination concluded that Network Rail should improve its efficiency by 4.6 percent (£16m) in Wales in 2019-20. This means that to deliver the same level of output, we expected Network Rail's costs in Wales to be 4.6 percent lower than in 2018-19, the final year of CP5. In 2019-20, it delivered £20m of efficiency improvements, £4m better than its target for the year and it plans to deliver £138m of efficiency in Wales in CP6.

3.150 Network Rail's delivery plan trajectory for Wales is shown in Figure 3.17 and the main initiatives that have contributed to the efficiency improvements in 2019-20 are shown in Figure 3.18.

Figure 3.17 Actual and forecast efficiency in CP6, Wales



Source: Network Rail

Figure 3.18 Main efficiency initiatives in 2019-20, Wales

Source: Network Rail

3.151 As shown in Table 3.8, Wales financially underperformed by £33m compared to its delivery plan for 2019-20. This was mostly due to underperformance on GWEP (see

Chapter 2). Wales also underperformed on operations, support, and maintenance costs, which was partially offset by outperformance on renewals.

Table 3.8 Wales's financial performance in 2019-20

£m, 2019-20 prices	Actual	Variance to CP6 delivery plan better / (worse)	Of which out / (under) performance
Turnover	65	1	1
Schedules 4 & 8	(8)	(1)	0
Network operations, support & maintenance	113	(9)	(9)
Total	**170**	**(10)**	**(10)**
Renewals	(141)	(3)	5
Enhancements	(118)	(11)	(28)
Total FPM			**(33)**

Source: Network Rail

Annex A: Summary of key financial information

Great Britain

	2019-20			2018-19
£m, 2019-20 prices	Actual	Delivery plan	Variance	Actual
Income	**A**	**B**	**C=A-B**	
Network grant income	5,260	5,887	(627)	4,187
Franchised track access charges	2,577	2,640	(63)	2,542
Other single till income	1,144	653	491	2,233
Total income	**8,981**	**9,180**	**(199)**	**8,962**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	657	665	8	680
Support costs	662	873	211	491
Traction electricity, industry costs & rates	798	857	59	757
Maintenance	1,737	1,714	(23)	1,534
Schedule 4 compensation payments	303	315	12	340
Schedule 8 compensation payments	57	94	37	324
Total operating expenditure	**4,214**	**4,518**	**304**	**4,126**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	2,908	2,964	56	3,128
Enhancements	1,824	1,905	81	3,211
Total capital expenditure	**4,732**	**4,869**	**137**	**6,339**
Other expenditure	**A**	**B**	**C=B-A**	
Financing costs & other	2,105	2,269	164	2,354
Corporation tax	0	9	9	0
Total other expenditure	**2,105**	**2,278**	**173**	**2,354**
Total expenditure	**11,051**	**11,665**	**614**	**12,819**
Other information				
RAB	72,513			71,959
Net debt	53,476			53,446
Gearing (net debt/RAB)	73.7%			74.3%

Source: Network Rail's regulatory financial statements

England & Wales

	2019-20			2018-19
£m, 2019-20 prices	Actual	Delivery plan	Variance	Actual
Income	**A**	**B**	**C=A-B**	
Network grant income	4,789	5,388	(599)	3,843
Franchised track access charges	2,210	2,266	(56)	2,179
Other single till income	1,104	608	496	2,198
Total income	**8,103**	**8,262**	**(159)**	**8,220**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	605	610	5	628
Support costs	580	785	205	441
Traction electricity, industry costs & rates	729	783	54	696
Maintenance	1,573	1,547	(26)	1,373
Schedule 4 compensation payments	282	302	20	323
Schedule 8 compensation payments	47	79	32	293
Total operating expenditure	**3,816**	**4,106**	**290**	**3,754**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	2,573	2,576	3	2,748
Enhancements	1,620	1,697	77	2,720
Total capital expenditure	**4,193**	**4,273**	**80**	**5,468**
Other expenditure	**A**	**B**	**C=B-A**	
Financing costs & other	1,895	2,045	150	2,127
Corporation tax	0	8	8	0
Total other expenditure	**1,895**	**2,053**	**158**	**2,127**
Total expenditure	**9,904**	**10,432**	**528**	**11,349**
Other information				
RAB	64,962			64,520
Net debt	48,092			48,109
Gearing (net debt/RAB)	74.0%			74.6%

Source: Network Rail's regulatory financial statements

Scotland

	2019-20			2018-19
£m, 2019-20 prices	**Actual**	**Delivery plan**	**Variance**	**Actual**
Income	**A**	**B**	**C=A-B**	
Network grant income	471	499	(28)	344
Franchised track access charges	367	374	(7)	363
Other single till income	40	45	(5)	35
Total income	**878**	**918**	**(40)**	**742**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	52	55	3	52
Support costs	82	88	6	50
Traction electricity, industry costs & rates	69	74	5	61
Maintenance	164	167	3	161
Schedule 4 compensation payments	21	13	(8)	17
Schedule 8 compensation payments	10	15	5	31
Total operating expenditure	**398**	**412**	**14**	**372**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	335	388	53	380
Enhancements	204	208	4	491
Total capital expenditure	**539**	**596**	**57**	**871**
Other expenditure				
Financing costs & other	210	224	14	227
Corporation tax	0	1	1	0
Total other expenditure	**210**	**225**	**15**	**227**
Total expenditure	**1,147**	**1,233**	**86**	**1,470**
Other information				
RAB	7,551			7,439
Net debt	5,384			5,337
Gearing (net debt/RAB)	71.3%			71.7%

Source: Network Rail's regulatory financial statements

Southern

	2019-20			2018-19
£m, 2019-20 prices	**Actual**	**Delivery plan**	**Variance**	**Actual**
Income	**A**	**B**	**C=A-B**	
Network grant income	1,281	1,442	(161)	785
Franchised track access charges	614	639	(25)	541
Other single till income	269	232	37	1,045
Total income	**2,164**	**2,313**	**(149)**	**2,371**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	177	180	3	175
Support costs	141	180	39	107
Traction electricity, industry costs & rates	234	256	22	210
Maintenance	380	378	(2)	318
Schedule 4 compensation payments	75	83	8	93
Schedule 8 compensation payments	(27)	9	36	117
Total operating expenditure	**980**	**1,086**	**106**	**1,020**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	706	681	(25)	764
Enhancements	209	221	12	506
Total capital expenditure	**915**	**902**	**(13)**	**1,270**
Other expenditure	**A**	**B**	**C=B-A**	
Financing costs & other	477	508	31	541
Corporation tax	-	2	2	-
Total other expenditure	**477**	**510**	**33**	**541**
Total expenditure	**2,372**	**2,498**	**126**	**2,831**
Other information				
RAB	15,903			15,720
Net debt	12,103			12,149
Gearing (net debt/RAB)	76.1%			77.3%

Source: Network Rail's regulatory financial statements

Wales & Western

	2019-20			2018-19
£m, 2019-20 prices	Actual	Delivery plan	Variance	Actual
Income	**A**	**B**	**C=A-B**	
Network grant income	786	876	(90)	696
Franchised track access charges	391	388	3	329
Other single till income	556	81	475	376
Total income	**1,733**	**1,345**	**388**	**1,401**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	88	83	(5)	94
Support costs	107	160	53	85
Traction electricity, industry costs & rates	86	91	5	89
Maintenance	256	249	(7)	220
Schedule 4 compensation payments	36	31	(5)	48
Schedule 8 compensation payments	(28)	1	29	38
Total operating expenditure	**545**	**615**	**70**	**574**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	460	456	(4)	525
Enhancements	387	432	45	858
Total capital expenditure	**847**	**888**	**41**	**1,383**
Other expenditure	**A**	**B**	**C=B-A**	
Financing costs & other	410	441	31	467
Corporation tax	0	1	1	0
Total other expenditure	**410**	**442**	**32**	**467**
Total expenditure	**1,802**	**1,945**	**143**	**2,424**
Other information				
RAB	13,121			13,394
Net debt	10,235			10,582
Gearing (net debt/RAB)	78.0%			79.0%

Source: Network Rail's regulatory financial statements

Eastern

	2019-20			2018-19
£m, 2019-20 prices	**Actual**	**Delivery plan**	**Variance**	**Actual**
Income	**A**	**B**	**C=A-B**	
Network grant income	1,639	1,853	(214)	1,356
Franchised track access charges	645	669	(24)	738
Other single till income	154	167	(13)	531
Total income	**2,438**	**2,689**	**(251)**	**2,625**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	200	210	10	210
Support costs	181	234	53	141
Traction electricity, industry costs & rates	245	261	16	231
Maintenance	512	504	(8)	453
Schedule 4 compensation payments	109	98	(11)	111
Schedule 8 compensation payments	28	39	11	73
Total operating expenditure	**1,275**	**1,346**	**71**	**1,219**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	851	850	(1)	925
Enhancements	800	764	(36)	953
Total capital expenditure	**1,651**	**1,614**	**(37)**	**1,878**
Other expenditure	**A**	**B**	**C=B-A**	
Financing costs & other	561	611	50	624
Corporation tax	-	3	3	-
Total other expenditure	**561**	**614**	**53**	**624**
Total expenditure	**3,487**	**3,574**	**87**	**3,721**
Other information				
RAB	20,350			20,051
Net debt	14,316			14,141
Gearing (net debt/RAB)	70.3%			70.5%

Source: Network Rail's regulatory financial statements

North West & Central

	2019-20			2018-19
£m, 2019-20 prices	Actual	Delivery plan	Variance	Actual
Income	**A**	**B**	**C=A-B**	
Network grant income	1,083	1,217	(134)	1,006
Franchised track access charges	560	570	(10)	571
Other single till income	125	128	(3)	246
Total income	**1,768**	**1,915**	**(147)**	**1,823**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	140	137	(3)	149
Support costs	151	211	60	108
Traction electricity, industry costs & rates	164	175	11	166
Maintenance	425	416	(9)	382
Schedule 4 compensation payments	62	90	28	71
Schedule 8 compensation payments	74	30	(44)	65
Total operating expenditure	**1,016**	**1,059**	**43**	**941**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	556	589	33	534
Enhancements	224	280	56	403
Total capital expenditure	**780**	**869**	**89**	**937**
Other expenditure	**A**	**B**	**C=B-A**	
Financing costs & other	447	485	38	495
Corporation tax	0	2	2	0
Total other expenditure	**447**	**487**	**40**	**495**
Total expenditure	**2,243**	**2,415**	**172**	**2,373**
Other information				
RAB	15,588			15,355
Net debt	11,237			11,237
Gearing (net debt/RAB)	72.1%			73.2%

Source: Network Rail's regulatory financial statements

National functions

Note: the numbers set out below are included in the above regional financial information.

	2019-20			2018-19
£m, 2019-20 prices	Actual	Delivery plan	Variance	Actual
Income	**A**	**B**	**C=A-B**	
Grant income	5,260	5,887	(627)	4,187
Franchised track access charges	549	607	(58)	477
Other single till income	786	299	487	1,888
Total income	**6,595**	**6,793**	**(198)**	**6,552**
Operating expenditure	**A**	**B**	**C=B-A**	
Network operations	20	27	7	19
Support costs	450	652	202	325
Traction electricity, industry costs & rates	795	855	60	755
Maintenance	74	74	-	41
Schedule 4 compensation payments	(14)	51	65	91
Schedule 8 compensation payments	9	10	1	1
Total operating expenditure	**1,334**	**1,669**	**335**	**1,232**
Capital expenditure	**A**	**B**	**C=B-A**	
Renewals	440	556	116	617
Enhancements	191	50	(141)	80
Total capital expenditure	**631**	**606**	**(25)**	**697**
Other expenditure	**A**	**B**	**C=B-A**	
Financing costs & other	2,105	2,269	164	2,354
Corporation tax	0	9	9	0
Total other expenditure	**2,105**	**2,278**	**173**	**2,354**
Total expenditure	**4,070**	**4,553**	**483**	**4,283**

Source: Network Rail's regulatory financial statements

Annex B: Link between efficiency and financial performance

Several measures can be used to report on a company's financial performance and there is no single right or wrong measure. The measures are not exclusive and can be complementary to provide a more rounded assessment. Our assessments focus on two measures; efficiency and the financial performance measure (FPM).

Consistent with general use in economic regulation, we use the term 'efficiency' to refer to changes over time of the cost of Network Rail's core business activities. These are Network Rail's activities of operating, maintaining and renewing the rail network, and supporting centralised functions such as human resources. These are broadly repeatable activities, which makes them easier to compare over time.

We use the term 'financial performance' to assess both core business activities and wider activities that generate income and expenditure such as enhancements to the network. Financial performance is a comparison of income and expenditure to the financial assumptions in a baseline such as in a business plan or regulatory determination. Other things being equal, if Network Rail has achieved the expected level of efficiency improvements in a business plan, it will report neither out or under-performance against that plan. However, in the real world, other things do result in differences between the reporting of efficiency and FPM. These include:

- items of income and expenditure that are included in FPM but not efficiency reporting. These include expenditure on enhancements, and other single till income (OSTI);
- external factors that can result in cost increases ('headwinds') and cost decreases ('tailwinds') such as changes to employment legislation. These external factors are reported separately to efficiency. However, they are all taken into account for FPM, so, for example, a headwind will negatively affect FPM;
- FPM adjusts for future cost increases resulting from business decisions made during the current financial year. For example, the costs of a major re-signalling project may be expected to increase in the next financial year due to a purchase decision made during the current financial year. This will result in negative financial performance being reported during the current financial year (consistent with the accruals accounting concept). Efficiency reporting does not adjust for this; and
- the additional cost of any changes to planned renewals work during a year are recorded as negative FPM, whereas the cost of the work avoided is recorded as FPM neutral. This is because FPM measures performance against the delivery plan and is designed to discourage regions' from making late changes to planned work during the year.

Annex C: Our review of Network Rail's efficiency improvements

Over the past 18 months we have undertaken a programme of work to gain assurance over the quality of Network Rail's plans to improve its efficiency. We have publicly reported on this work including most recently in December 2019[42].

We have also undertaken a related programme of work to ensure that we are satisfied with how the efficiencies are being calculated and reported by Network Rail from these efficiency initiatives. This work has not been so much about assessing plans or governance, but about working with Network Rail to understand, and challenge where necessary, their methods for calculating efficiencies, including detailed review of spreadsheet-based calculations, inputs and assumptions.

We have undertaken this work through a series of structured meetings with Network Rail's central efficiency reporting team, technical meetings with reporting leads, desk based review of spreadsheets and supporting documentation, and follow-up meetings where necessary. The purpose of this work has been to:

- understand the business changes that should result in efficiency improvements;
- review the methods for calculating efficiency improvements resulting from these business changes. For example, does the calculation method make sense?
- satisfy ourselves about the values of the input parameters being used;
- understand the uncertainty in the calculations (not all costs and benefits are easy to measure);
- review Network Rail's internal assurance arrangements; and
- assess the scope for inappropriate changes to calculations.

Our work started with reviewing the most material efficiencies, moving on to smaller efficiencies (by value). This has been an iterative process, as Network Rail has accepted our feedback to improve some of its calculations. By tackling some of the largest, and to some extent most complex efficiency calculations first, it has been easier for Network Rail and us to agree the approach for some of the simpler efficiencies where the calculations largely follows the same approach.

Different efficiency initiatives require different measurement methods which depend on the nature of the business changes. There are four groupings that Network Rail uses for measuring efficiencies as explained below.

[42] See https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment.

Table C1: Approaches used by Network Rail to calculate year 1 efficiencies

Efficiency calculation method	Year 1[43]	%
Straightforward (i.e. rate x volume)	£90m	22%
Supported by a calculator	£140m	35%
Bespoke arrangement (developed by Arcadis)	£100m	25%
Local calculations	£70m	18%

Straightforward calculations

Where an efficiency has been achieved from a straightforward change in rates or volumes (for example due to improved contractual terms), a simple rate multiplied by volume calculation is sufficient.

The most significant use of this approach is for improved contracting strategies, Network Rail's single largest efficiency initiative. Network Rail has demonstrated that its internal accountabilities and assurance arrangements for delivering and reporting these efficiencies are robust.

Efficiencies supported by an efficiency calculator

Network Rail has developed efficiency calculators for around a third of its efficiency initiatives. These calculators are used by regions to calculate and report more complex efficiencies on a consistent basis including intelligent infrastructure, rail milling, plain line pattern recognition and electrical safety delivery.

The calculators were developed by Network Rail's Benefits Calculation Working Group (BCWG), which comprises relevant experts from each region, and in separate discussions with us. We have seen that the calculators are being used consistently across the business with a sensible level of regional input and challenge (i.e. they have not been simply imposed by Network Rail centre).

There are areas where we think that Network Rail could do more, particularly around quantifying uncertainty and the accuracy of its efficiency calculations (for example, sensitivity to hard to measure input parameters). Overall, we are satisfied with the quality of the calculators and the on-going work to improve them.

Efficiencies supported by bespoke arrangements

Network Rail appointed an independent consultant (Arcadis) to support methods for measuring some efficiency improvements where the benefits are hard to quantify. These include workbank planning, optimisation of access, early contractor involvement and policy/legislation changes.

Arcadis advised on gaps compared to best practice and has assisted Network Rail in developing a set of key performance indicators (KPIs) to support the measurement of these efficiencies. This

[43] The total here and in annex B is £400m based on Network Rail's Period 9 efficiency report. Full year efficiency was £385m.

work is on-going, and we will continue to engage with Network Rail to ensure that the reporting of these more difficult to measure efficiencies is robust.

Local calculations

For small, locally developed efficiency initiatives, centrally developed calculators are not appropriate. In this case, efficiencies are calculated on a bespoke basis.

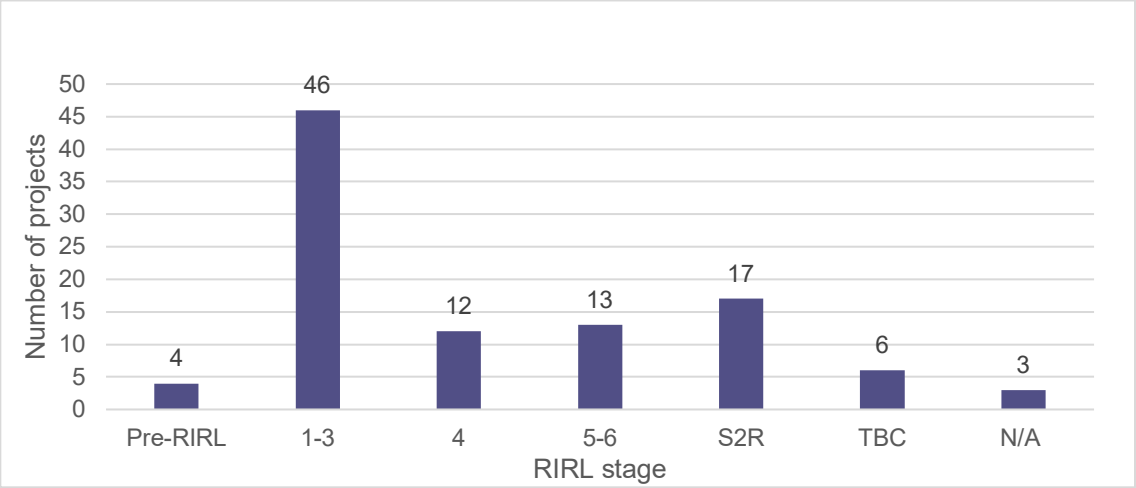
We have reviewed Network Rail's assurance processes for the use of local calculations[44]. These appear to be fit for purpose. We will continue to monitor these through our engagement with Network Rail's regional finance teams over the next year.

[44] Network Rail has developed a business partnering model where senior members of the central team are responsible for the close support of regions. This includes visiting the regions on a periodic basis to review their progress with both local and national efficiency initiatives.

Annex D: Progress of research and development projects

Network Rail uses the rail industry readiness level (RIRL) as a measure of how ready a new product or system is for deployment. As shown in Figure D1, most of Network Rail's CP6 research and development (R&D) projects are in RIRL stages 1-3 with a further 25 projects in stages 4-6. 17 projects are included in the Shift2Rail portfolio, a European R&D programme which sits outside the RIRL. Overall, we consider that good progress has been made developing Network Rail's CP6 R&D programme in 2019-20. We will continue to monitor and report on progress of projects through RIRL levels over the next year.

Figure D1: Rail industry readiness levels of Network Rail's R&D projects



Key	Stage	Description
RIRL 1-3	Conception, Opportunity Development & Proof of Concept	Identification of need and potential benefits, quantification of that benefit, verification of demand, proof of concept
RIRL 4	Validation	Technology verified and tested against user requirements, market testing and/or laboratory validation
RIRL 5-6	System Demonstrator and Operational transition	Prototype demonstrated and developed, supplied to required standard. Commercial agreements progressed
RIRL 7	Initial Deployment	First of Class asset deployment for operational usage, low rate of production ramping up
RIRL 8-9	Roll Out and Whole Life Management	Full rate production, on-going continuous improvement, reliability and growth
S2R (Shift2Rail)	N/A	RIRL not suitable as European projects are subject to different readiness measures
TBC and N/A	RIRL is not confirmed	Mostly new projects or projects in transition

Source: Network Rail

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