



Annual assessment of Network Rail

April 2019 – March 2020

Southern Region



6. Performance of Network Rail's Southern region

6.1 Network Rail's Southern⁵⁶ region links major towns, cities, ports and freight terminals in the South of England. This chapter focuses on Network Rail's delivery in the region's three routes of Sussex, Kent and Wessex, and does not cover Network Rail High Speed.

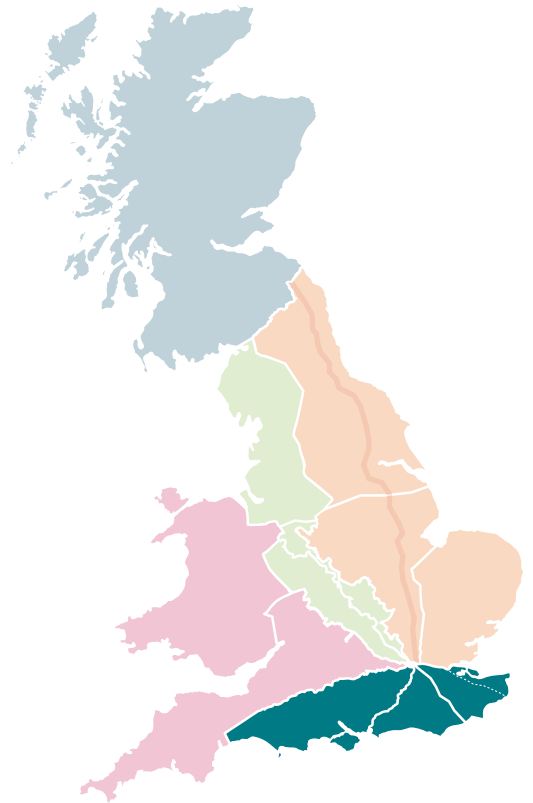
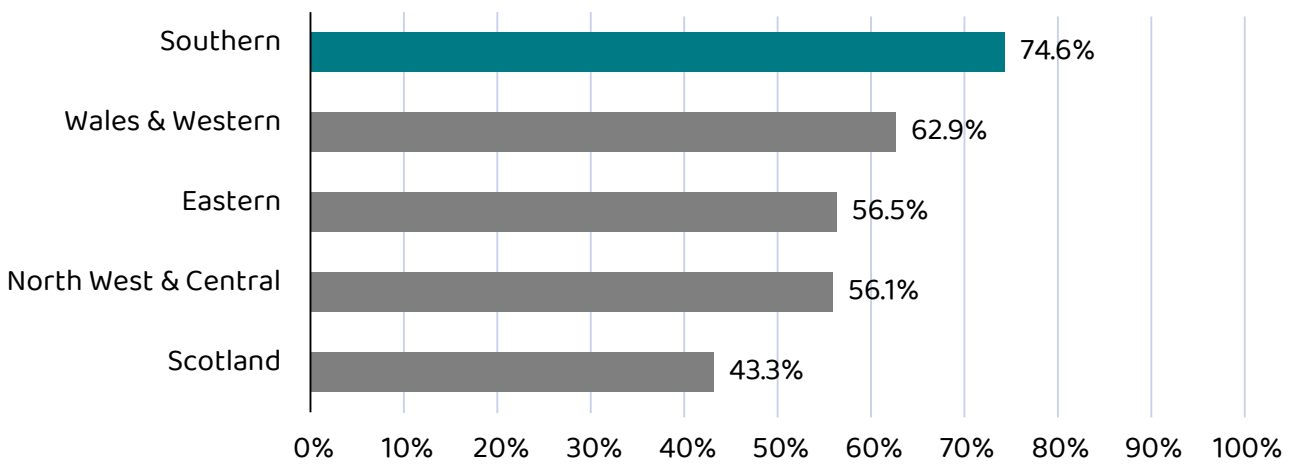


Figure 6.1: Overall scorecard performance by region, 2019-20



Source: Network Rail's regional scorecards

⁵⁶ Network Rail's Southern region: <https://www.networkrail.co.uk/running-the-railway/our-regions/southern/>

The Southern region was top in delivering scorecard targets

6.2 Network Rail uses scorecards to align its priorities with those of its customers and help it incentivise its management to deliver those priorities.

- Southern's overall scorecard performance was good and, at 74.6%, the highest of Network Rail's five regions.
- Southern delivered strong train performance to a number of operators. It delivered good performance in health and safety, investment and asset management scorecard measures.
- Train performance delivery on the Wessex route was poor and needs to improve.

Passenger train performance improved; freight train performance worsened at the end of the year

Southern's contribution to passenger train performance has generally been above the levels that it agreed with its customers. Its management of the network has led to less delay than the levels projected in PR18. But freight performance has worsened at the end of the year.

6.3 Train performance is a top priority for passengers and freight. In our Periodic Review 2018 (PR18)^{57,58}, ORR set regional trajectories for passenger and freight performance.

Passenger train performance in Southern has improved – and is better than target

6.4 For passenger performance we hold Network Rail's regions to account for delivery of the 'Consistent Region Measure for Performance' (CRM-P). This measures the delay minutes caused by each region, for every 100km of train travel, and allows comparisons between regions. For CP6, we set trajectories for CRM-P and minimum levels ('floors').

6.5 Southern's trajectory for CRM-P was based on it achieving 2.90 minutes delay per 100km of train travel. The region finished the year 0.22 minutes better than target at 2.68 minutes (and 0.81 minutes above the floor). It has therefore caused less delay to train operators than was anticipated – a good outcome for passengers. Performance was particularly good in Kent and Sussex.

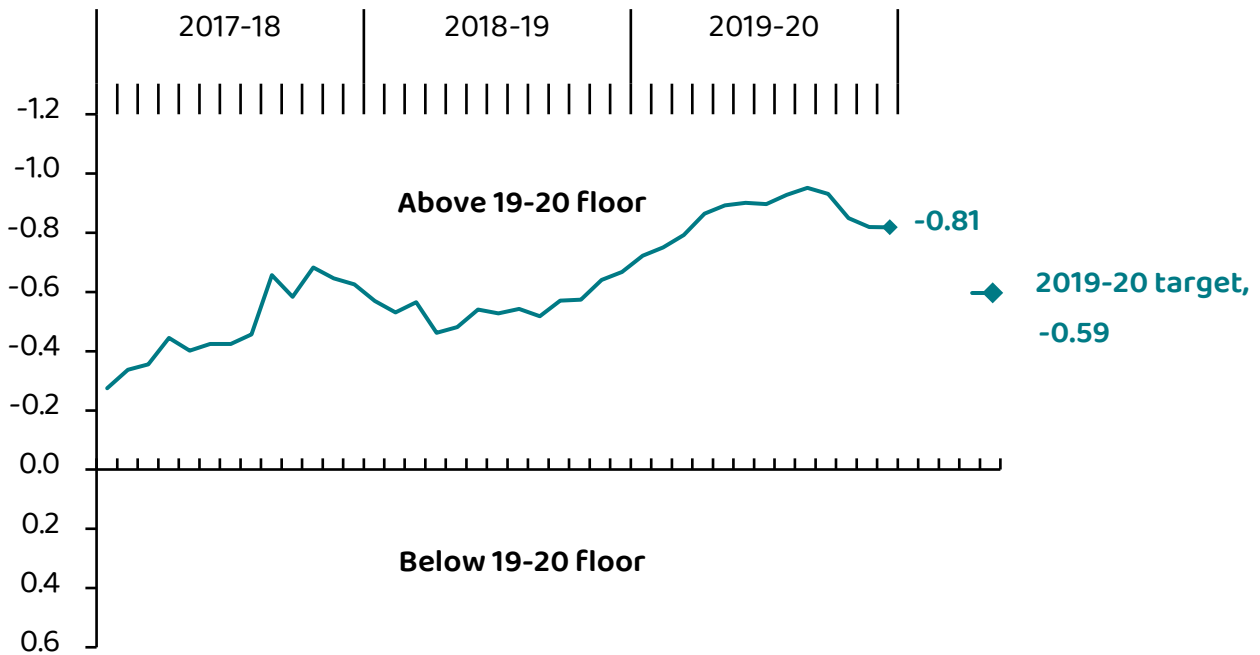
6.6 Despite this, cancellations across the region have been high. While cancellations can be an important element of service recovery, particularly during disruption, they can be frustrating for passengers. Southern needs to focus on reducing the level of cancellations across the region for the benefit of its passengers.

⁵⁷ ORR's Periodic Review 2018: <https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/price-controls/periodic-review-2018/publications/final-determination>

⁵⁸ ORR letter on PR18 targets:

https://orr.gov.uk/_data/assets/pdf_file/0010/41311/holding-network-rail-to-account-letter-2019-06-19.pdf

Figure 6.2: Passenger train performance (Network Rail caused delay minutes normalised, CRM-P) – variance to regulatory floor for Southern region, 2017-18 to 2019-20



Source: ORR analysis of Network Rail data

Figure 6.3: Cancellations versus target by operator, 2019-20

Operator	Cancellations	
	2019-20	Target
Govia Thameslink Railway	4.5%	3.2%
Southeastern	2.5%	2.2%
South Western Railway	3.7%	1.7%

Source: ORR analysis of Network Rail data

6.7 While Southern’s overall contribution to train performance was good, it did vary across the routes in the region. The Wessex route struggled in terms of passenger performance, in particular for South Western Railway.

6.8 Network Rail and South Western Railway agreed joint 2019-20 performance targets for the ‘Public Performance Measure’ (PPM), which measures the percentage of trains that arrive at the final destination within five minutes of schedule and the ‘Cancellations and Significant Lateness’ (CaSL) metric, which measures the proportion of trains that fail to call at one or more stop or are greater than 30 minutes late at their final destination.

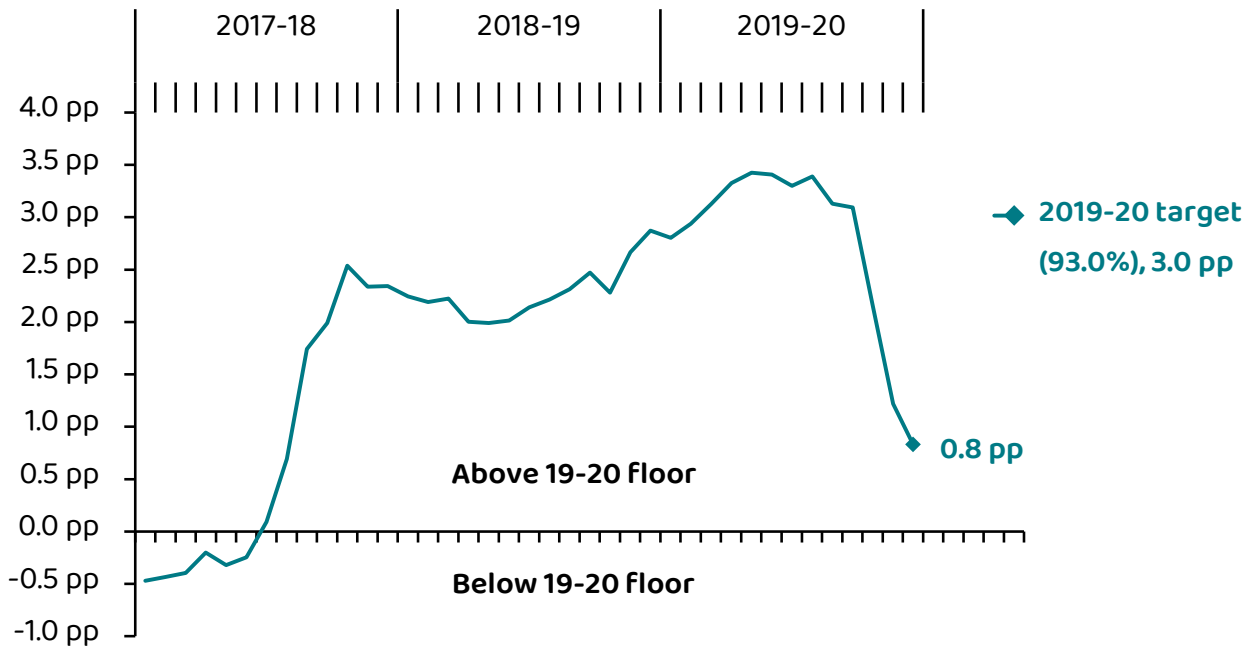
- 6.9 South Western Railway finished the year with a PPM of 80.5% and a CaSL of 5.7%, these values were worse than their respective agreed targets (87.0% and 4.1%).
- 6.10 There are a number of factors behind the performance issues for South Western Railway, including many which are outside Network Rail's control (for example industrial relations issues and train crew / fleet issues). However, the Southern region has acknowledged that performance on the Wessex route must improve, and has identified two areas within its control that are impacting heavily on train performance: fatalities / trespass and network management.
- 6.11 We stepped up our monitoring in this area in autumn 2019, and have raised these issues with the region. Southern has taken action to address them, for example it has stationed trespass and welfare officers at key locations to reduce the frequency of trespass and attempted suicide on the railway. However this did not have a material impact on the full year performance figures.
- 6.12 We met Southern's Wessex performance team and visited the Network Rail and South Western Railway Joint Performance Improvement Centre. We consider this to be an example of good practice in the industry's attempts to improve train performance and are encouraged by this strong collaborative working which we expect to continue.
- 6.13 We will continue to monitor Southern's delivery of performance improvement initiatives closely over the next year to ensure it focuses relentlessly on better train performance for passengers.

Freight train performance worsened at the end of the year

Freight performance was steady for most of the year but declined significantly at the end due to a derailment and severe bad weather.

- 6.14 We measure freight performance using the 'Freight Delivery Metric – Region' (FDM-R). This measures the percentage of commercial freight services that arrive at a planned destination within 15 minutes of their booked arrival time or with less than 15 minutes of Network Rail or passenger operator delay.
- 6.15 For Southern the end of year FDM-R was 90.8% – lower than the target of 93.0%. However, for much of the year the region was performing better than target, before a sharp drop in the last few periods. We have discussed this drop with Southern, who have attributed it to the impact of a freight train derailment at Eastleigh and a significant number of earthworks failures within the region following prolonged heavy rainfall. The increase in earthworks failures is covered in the asset management section below.

Figure 6.4: Freight performance (FDM-R) – variance to regulatory floor for Southern region, 2017-18 to 2019-20



Source: ORR analysis of Network Rail data

Case Study: The use of social media platforms to keep passengers informed

Network Rail has increased its efforts to engage directly with railway passengers, particularly in relation to disruptive events on the railway but also to publicise planned service alterations and safety warnings. Within the Southern region the South East (Sussex and Kent) route has historically been proactive on social media platforms such as Twitter. Recently, a similar approach has been adopted by the Wessex route.

Network Rail has also published increased levels of content on its website to provide further information for the travelling public – for example around the freight train derailment at Eastleigh⁵⁹. We support Southern’s proactive use of different media to engage more directly with its passengers.



⁵⁹ Network Rail communication about the freight derailment at Eastleigh: <https://www.networkrail.co.uk/stories/eastleigh-derailment-and-other-incidents>

Asset management in Southern has improved

Fewer infrastructure assets have failed in the region compared to previous years, and renewal work has been delivered in line with plans.

- 6.16 Network Rail needs to secure the maintenance, renewal and replacement of the network so it is safe and operable, and do so in a way that is sustainable and efficient over the long-term. In CP6, we test this using a measure of asset sustainability (the Composite Sustainability Index, CSI). We have agreed Network Rail's target for the end of CP6, based on a defined level of change since the end of control period 4 (CP4).
- 6.17 The Southern region finished 2019-20 with a CSI score of -2.2%. This represents a decrease in overall asset sustainability of 2.2% since the end of CP4. The region's trajectory for CP6 is to end the control period with a CSI of 4.1%.
- 6.18 The measure of sustainability is slow-moving, because of the very long operational life of railway assets. We therefore also monitor asset failure rates (and their impact), volumes of maintenance and renewal delivery and certain other asset-specific measures, which can be used as a proxy for longer-term sustainability.
- 6.19 Network Rail's regional scorecards contain some of these shorter-term measures, for which the Southern region has generally performed well. The region experienced fewer service affecting failures than target. This contributed to the region achieving a composite reliability index score of 8.4%. This means that asset reliability on the route in 2019-20 was 8.4% better than it was in the final year of CP5. In particular the reliability of the track showed significant improvement.
- 6.20 Due to the relative infrequency of their occurrence, earthworks failures are not included within the composite reliability index. Historically, large peaks in earthworks failures correspond to periods of adverse weather.
- 6.21 Over the winter of 2019-20 the Southern region experienced prolonged severe weather, which corresponded with the highest number of earthworks failures since the winter of 2013-14, and a deterioration in train performance (particularly for freight services). Southern responded well to these failures, for example rebuilding the line between Epsom and Ewell West over the festive period, and reopening the Redhill to Tonbridge line early following a landslip at Edenbridge.
- 6.22 The region is taking action to address the risk of earthworks failures and landslips, using remote monitoring technologies and undertaking works at high risk sites. We will be monitoring the region closely to understand how it can manage the infrastructure safely and efficiently while minimising the disruption to passengers. This is particularly important given the predicted effects of climate change.

6.23 The Southern region has delivered its planned key renewals volumes in 2019-20, delivering more than its target in many areas. This is a positive outcome, and demonstrates the strength of the region's renewals planning process.

6.24 However Southern has reported some areas where renewals work did not deliver the volumes expected. In particular, buildings work at a number of franchised station sites was deferred to later in the control period due to issues with procurement and prioritisation of works at managed stations as part of the Putting Passengers First programme. These changes have been managed according to Network Rail's deferral process. In the remaining years of CP6, the Southern region will need to focus on planning, as well as liaising with key stakeholders in order to manage the delivery of these additional works.

Inspection of tenanted arches

6.25 In 2018, Network Rail sold leases to commercial spaces under railway arches to a third party, Arch Co. Many of the arches sold under this agreement are within the Southern region.



6.26 We note that there is still significant non-compliance for visual and detailed examination of tenanted arches. We will be monitoring Network Rail to ensure it enforces its contract with Arch Co and completes the necessary examinations to return to compliance with its examination standards.

Major works on the Thameslink enhancement programme were completed

Network Rail delivered the final Thameslink milestone in December 2019, completing infrastructure that will enable 24 trains per hour through the Thameslink core.

- 6.27 The Thameslink Programme is a £5bn, multi-year project to upgrade and expand the Thameslink rail network, providing services to the north and south of London. The project uses advanced in-cab signalling and control technology (European Train Control System) and Automatic Train Operation which will improve capacity and capability through the Thameslink core, enabling the very high volume of trains per hour and a faster recovery following timetable disruption. In December 2019, Network Rail delivered the final milestone of this project, completing the London Bridge station reconstruction and entry into service of infrastructure that will provide 24 train paths per hour between St. Pancras and Blackfriars.
- 6.28 The May 2019 timetable change introduced a service level of 20 trains per hour. Network Rail and operators are making preparations for increasing the service level, including a major driver training programme which commenced in October 2019⁶⁰. It is a positive development that following the completion of the works passengers within the region are now experiencing an improving service. However, there is still more to do in delivering a reliable and consistent service.



⁶⁰ Full driver training has not yet started due to coronavirus pandemic restrictions.

Southern has delivered good safety performance

The Southern region has made improvements in a number of health and safety areas. It beat its internal target for worker safety – reducing the lost time injury frequency rate. However, there are weaknesses in safety critical communications.

- 6.29 Overall safety performance in the Southern region was good in 2019-20. The region performed well for all four of its scorecard safety measures. The lost time injury frequency rate measure improved, although there were significant differences between routes.
- 6.30 The Southern region achieved its scorecard targets for train accident and level crossing risk reduction milestones. However, overall level crossing risk on the region remains broadly unchanged. The Sussex route is achieving gradual reductions in the number of track faults.
- 6.31 Considerable effort has gone into strengthening safety assurance processes. A lot of assurance activity, structured and informal, takes place and is broadly very effective. There are, however, some areas of weakness where Southern should improve. For example, assurance in the areas of track worker safety and safety critical communications varies in extent, rigour and lasting effect.
- 6.32 Weaknesses in safety critical communications have been a factor in a number of recent incidents. ORR inspections have identified that, while many communications are to a good standard, there is a continuing tolerance of less professional communications, which needs to be removed.
- 6.33 Progress is being made in occupational health matters, for example in protection of staff against asbestos and respirable silica dust. Southern has set up an occupational health clinic at London Victoria station, an excellent initiative bringing both better health care and resource efficiency. There is scope for improvement in arrangements for the manual handling of heavy equipment, for instance rail stressing kit.
- 6.34 Further information on ORR's safety inspection activity, alongside a more detailed assessment of Network Rail's safety performance will be published in ORR's Annual Health and Safety Report (due for publication in summer this year).

Southern has performed well financially and delivered efficiencies

The Southern region has broadly delivered to budget, and provided good evidence of efficiency improvements delivered in 2019-20. It can make improvements in the planning for efficient delivery in 2020-21 and future years.

Financial performance was on target

- 6.35 Our primary measure of Network Rail's financial performance, the financial performance measure (FPM) covers most of Network Rail's activities. It provides a better understanding of Network Rail's financial performance than simple income and expenditure variances.
- 6.36 FPM compares actual income and expenditure to Network Rail's annual budgets, and to the financial assumptions in our PR18 final determination (which underpin the company's funding). It ensures that Network Rail does not benefit from delaying work or not delivering required outputs. A positive FPM means that Network Rail has outperformed and vice versa.
- 6.37 The Southern region spent £1,450m against a budget of £1,483m in 2019-20, and financially outperformed against its CP6 delivery plan by £4m (0.2%). This outperformance was primarily driven by good performance in a number of areas which led to payments from train operators under the schedule 8 regime as well as the delivery of operational and support efficiencies. This was partially offset by renewals underperformance. Whilst the region delivered more volumes than expected, costs were also higher – in particular for track and earthworks, the resignalling scheme at Feltham and electrical substation costs.

Efficiency has been delivered in line with plans










- 6.38 In CP5 Network Rail generally delivered poorly across renewals and efficiency targets. In our Periodic Review 2018 we set Network Rail a £3.5bn efficiency improvement challenge to improve its core operations, support, maintenance and renewals activities across the business.
- 6.39 Network Rail responded to our challenge by developing an efficiency improvement plan, which we have reviewed. In 2019-20 the Southern region delivered £76m of efficiency improvements, in line with the £76m assumed in its delivery plan. The largest efficiencies were achieved in LEAN initiatives, for example new styles of working with contractors and a reduction in lost shifts, and reduced activities due to new technologies.
- 6.40 These efficiencies are positive, particularly given the improvements since CP5. However, the efficiency challenge increases in future years as Southern is forecasting to deliver between £641m and £729m efficiencies over CP6 (central forecast of £710m).
- 6.41 Efficiencies are planned to increase in 2020-21. Network Rail, in its CP6 readiness report, considers that 62% of the 2020-21 efficiencies in Southern will be achieved from projects that have already been delivered or have clear project plans. However, this means that 38% of target efficiencies have no clear project plans, or plans in place but low confidence in delivery.
- 6.42 Therefore the region still needs to focus efforts on delivering these efficiencies – particularly in relation to the quality of renewals efficiency plans, which are critical in delivering both the required renewals volumes and the associated efficiencies.

Leading indicators show progress in planning efficient delivery

6.43 Poor planning for CP5 resulted in a number of the issues with Network Rail's renewals delivery and efficiency. In light of this, we required Network Rail to demonstrate that it is better prepared to deliver efficiently from the start of CP6 – in part through developing and reporting on new leading indicators.

6.44 We have seen progress with these leading indicators of efficient delivery, although we have had concerns in some areas. The table below provides an update on the Southern region's preparations to deliver efficiently in 2020-21⁶¹. Network Rail's underpinning analysis was undertaken before the significant recent impact of the coronavirus pandemic. There is likely to be disruption and we will report on this in due course.

Figure 6.5: Leading indicators for efficient delivery in 2020-21, Southern region

Route/ Region	Renewals Planning		Securing Engineering Access			Maintenance requirement 2020-21			
	Work authorised in Oracle	Target	% of required access booked	Target	Current headcount	Target			
South East	72%		72%	102%		73%	92%		95%
Wessex	60%		77%	102%		80%	88%		96%
National/ GB	69%		83%	76%		93%	95%		99%

Source: Network Rail CP6 readiness report

6.45 Efficient renewals planning is important to ensure a stable profile of work over time within Network Rail's supply chain. To track this, Network Rail measures the percentage of renewal projects which have financial authorisation. At the end of 2019-20 the South East route was on target for financial authorisations, however the Wessex route was below the national average, and below target.

6.46 This level of financial authorisation gives some cause for concern. However, we can also consider earlier stages of the planning lifecycle, such as remits issued and accepted by the supply chain. Under this measure the supply chain for the Southern region has accepted around 90% of planned renewals for 2020-21 (87% for South East, 93% for Wessex).

6.47 Southern achieved, and exceeded, its internal target for booking disruptive access to the network for planned engineering work in 2020-21. All expected possessions were in place for 2020-21 at the start of the year.

⁶¹ This section is disaggregated by route rather than region. This is because some of the internal reorganisation from routes into regions as part of Putting Passengers First have not yet been implemented.

- 6.48 Overall, we consider that Southern has made progress in developing its 2020-21 renewals workbank compared to previous years, but authorisations in Wessex need to be progressed.
- 6.49 Like most regions across the country, Southern has a maintenance headcount shortfall compared to its required maintenance headcount for 2020-21. It has recognised this issue and has recruitment plans in place to deal with it.
- 6.50 Further information on Network Rail's financial performance, efficiency initiatives and preparations for 2020-21 will be published in ORR's Annual Efficiency and Finance Assessment (due for publication in summer 2020).



© Crown copyright 2020

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at orr.gov.uk

Any enquiries regarding this publication should be sent to us at orr.gov.uk/contact-us

