ORR
OFFICE OF **RAIL AND ROAD**

Report: Network Rail's performance delivery to Southeastern

July 2017

Contents

Executive summary

This report sets out the findings of ORR's investigation to establish whether Network Rail (NR) is doing everything reasonably practicable to meet its licence obligations in relation to its delivery of regulated performance outputs for Southeastern services.

Performance outputs, defined as Public Performance Measure (PPM), Cancellations, and Significant Lateness (CaSL), for each franchised operator are specified in the bi-laterally agreed Performance Strategies and are enforceable as Customer Reasonable Requirements under NR's network licence.

We chose to investigate NR's delivery to Southeastern for three reasons:

1. PPM and CaSL has surpassed the threshold for regulatory intervention for the last two years;

2. At the end of 2016-17 NR delay caused to Southeastern was higher than for other Train Operating Companies (TOCs) (71% versus the average of around 60%); and

3. We wanted assurance that NR is minimising the impact of large engineering works such as the Thameslink Programme (TLP).

Our investigation focused on three key areas:

a) the management of infrastructure assets;
b) the interaction between the South East Route and Infrastructure Projects (IP), particularly in respect of the TLP; and
c) the planning, delivery and review of train performance improvement.

The South East Route has a relatively new management team, with the two key appointments, Route Managing Director and Chief Operating Officer in the second half of 2016. They have brought a new approach to the challenges they face, focussing on a data-driven approach and strong emphasis on excelling at the basics of performance delivery.

Our findings and recommendations for each of the above three areas are discussed below.

The management of infrastructure assets

The nature, intensive use, age and condition of assets in some parts of Kent mean the infrastructure is vulnerable to failure. Taking this into account, when looking at NR's approach to asset management we found that:

a) NR is approaching the challenges in a positive manner and is serious about improving the situation, reducing incidents and the associated delays; and

b) NR is aiming to improve the robustness of its processes in response to asset failure. This includes updating areas such as training, preparedness, and organisational structure.

Good progress is being made, but we consider that there are areas where NR could improve, including:

a) the prediction and prevention of failures arising from the track condition as well as other failures. NR could use the full range of its prediction capabilities to better manage potential failure modes;

b) the effective sharing of best practice. During our investigation we were not convinced there was the same level of best practice sharing from other Routes that had been seen in previous years; and

c) continually improving vegetation management, which is an on-going problem for the rail network. We found that Kent does not have a single point of control for this subject. Such a position would help promote smart and efficient ways, such as using on train video recording, to identify and tackle areas of concern.

Engineering works – including the interaction between the Route and Infrastructure Projects (IP), particularly the Thameslink Programme (TLP)

We saw evidence that NR was minimising the impact of the TLP on the operational railway with the number of delay minutes attributable to the TLP project falling in 2016-17.

We saw close working arrangements with stakeholders. For example, there was evidence that Route maintenance staff are being embedded in the project, helping inform the

project's work; and the development of a 'phase in/phase out' approach between the TLP and the Route on newly handed over assets.

The TLP has demonstrated that key lessons have been learnt from earlier performance issues and it is now engaging far more closely with operators to plan access and deliver construction work.

These improvements are positive, but we highlight that the project must continue to:

a) build on recent improvements and lessons learned, for example from the 2016 points failures at London Bridge, ensuring all parties are aware of the configuration and inspection requirements of new asset types; and

b) continue to closely work with stakeholders to manage access and deliver the required volumes while avoiding unnecessary overruns.

NR should also share best practice with other routes that are planning and delivering major infrastructure projects in order to minimise the performance impact on those routes.

NR's performance governance process

Our investigation assessed a number of areas for improving performance, including the discipline of performance planning; NR's delivery and review of Train Service Management; and whether NR was adequately resourced.

In its performance planning, we noted that NR had recently developed an overarching strategic change programme entitled Framework 42, which looks at all areas across the business. An underlying principle is a focus on the 'basics'. We also found that NR's plans for 2017-18 were set out in detailed documents. We took account of evidence showing that there is a structure in place to hold managers to account to their outputs. This includes weekly and periodic "visualisation sessions".

For Train Service Management we found that there was a joint NR /TOC focus to make the Kent Integrated Control Centre a more effective deliverer of train services. NR and Southeastern have demonstrated how they undertake quick reviews and more in-depth significant performance reviews.

In terms of resourcing, we found that there are several NR vacancies in the Joint Performance Team (JPT). We also established that the growth in the unexplained and un-

investigated delay category is largely driven by the volume of incidents exceeding the capacity of the attribution team.

We consider that these new governance structures and a renewed focus on performance planning should bring improvements, if resourced as planned and sustained. We highlight the following areas NR needs to continue to prioritise:

a) ensuring sufficient rigour and discipline is used in its planning to ensure benefits of the performance plan are realised;

b) focusing on its improvement plans, embed the Framework 42 plan and deliver this throughout the year;

c) developing more detailed service recovery plans; and

d) fully recruiting into the positions in the JPT and delay attribution teams.

Summary of Conclusions

On balance, we consider that the evidence demonstrates that NR is currently doing everything reasonably practicable to deliver train service performance to Southeastern in accordance with its obligations under Condition 1 of its Network Licence. We have seen the following improvements and planned activities:

- for performance planning, there is a good framework for improvement plans, proper governance of these plans, and an articulated strategy to deliver these improvements;

- in asset management, there are areas for improvement but we have seen a positive approach to tackling current issues. NR is developing processes to improve its response to asset failures; and

- for the TLP, NR has learnt lessons, achieving a significant reduction in delay minutes, and better stakeholder relationships.

Southeastern has achieved its performance targets in every period since the final period of 2016-17. This suggests that NR's efforts in recent months are having a positive effect. We are however conscious of the need for NR to sustain its efforts and activities to ensure continued delivery. Our engagement with Southeastern and DfT during the investigation also supports the view that there NR is focused on driving improvements to Southeastern services, and across the wider South East route.

We consider that there are certain areas that NR still needs to prioritise to ensure Southeastern's performance continues to improve. These include:

a) focusing on its improvement plans, embed the Framework 42 plan and deliver this throughout the year;

b) properly resourcing the JPT and the delay attribution teams, to ensure the quality of the data improves and that there is resource available to support performance improvement across the Route;

c) exploring ways to be smarter in predicting all asset failures; and

d) embedding lessons learned from TLP, especially with regard to TOC-Route-Project liaison, across the whole of NR. Key lessons have been learned from the TLP. NR must now make sure that this is fixed in its corporate memory.

1. Introduction

This chapter explains why we launched an investigation into Network Rail's delivery to London Southeastern Railway (referred to as Southeastern in this report). It also provides an overview of the terms of reference of the investigation.

1.1. Background

1. The framework for how ORR monitors and enforces Network Rail's (NR's) delivery of train service performance is set out in Annexes B, C and D. The relevant part of this framework can be summarised in the following steps:

   - at the start of the year, NR's routes agree annual targets[1] with each of the train operators in their individual joint performance strategy;
   - ORR monitors NR's delivery throughout the year, escalating concerns for resolution on an ongoing basis; and
   - at the end of the year ORR reviews outturn against target and if this falls outside a prescribed tolerance limit then ORR considers whether further regulatory action is required.

2. In 2016-17, the PPM targets for seven train operators in England and Wales were missed by more than the prescribed tolerance (2.0pp). The CaSL targets for 15 train operators were missed by more than the prescribed tolerance (0.2pp). Further detail about 2016-17 performance across both England & Wales and Scotland can be found in the July 2017 NR Monitors[2] published alongside this report. The Monitors provide ORR's assessment of NR's performance in 2016-17. Within this national

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[1] Public Performance Measure (PPM) and Cancellations and Significant Lateness (CaSL). For 2017-18, in consultation with Southeastern, these metrics changed in NR's PBR Scorecard to be 1) Right time MAA at final destination 2) NR contribution to Southeastern CaSL MAA and 3) Delay minutes affecting Southeastern (NR, TOC-on-TOC, FOC-on-FOC, not TOC-on-Self).

[2] England and Wales Network Rail Monitor - Quarters 3 & 4 2016-17:
http://www.orr.gov.uk/__data/assets/pdf_file/0015/25206/network-rail-monitor-2016-17-q3-4.pdf

Scotland Network Rail Monitor - Quarters 3 & 4 2016-17:
http://www.orr.gov.uk/__data/assets/pdf_file/0016/25207/network-rail-monitor-scotland-2016-17-q3-4.pdf

picture, ORR decided to investigate further NR's delivery to Southeastern for the reasons set out in this chapter.

1.2. NR's South East route and Southeastern train services

3. In 2014, the formerly separate NR Kent and Sussex Routes were combined into a single NR South East Route, with Kent and Sussex becoming areas within the route. Sussex Area predominantly serves Govia Thameslink Railway (GTR) services and Kent Area predominantly serves Southeastern services.

4. Southeastern runs about 2,000 services per weekday, with fewer services at the weekend[3]. This constitutes around 11% of all passenger journeys in GB each year, primarily in Kent, East Sussex and south east London. Southeastern is operated by Govia, a joint venture between Go-Ahead Group and Keolis, with the franchise ending in December 2018. 70% of services start or terminate in London.

1.3. Reasons to investigate NR's delivery to Southeastern services?

5. NR failed to achieve PPM and CaSL targets in 2015-16. As reported in the July 2016 Monitor[4] we decided not to launch a formal investigation at that time because we considered that NR had a good understanding of what had gone wrong in 2015-16 and appeared to be taking the right steps to address the issues. Throughout 2016-17 ORR stepped up its scrutiny of NR's delivery, meeting more regularly with Southeastern, attending joint reviews of performance and providing independent challenge. The outturn PPM and CaSL for 2016-17 was again worse than the prescribed tolerance allowed for against the performance strategy target. In contrast, very recent performance has been much improved. In periods 1 and 2 of 2017-18, Southeastern has outperformed its performance strategy targets.

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[3] At the weekend 1755 train services run on a Saturday and 967 on a Sunday. Source Southeastern,

[4] July 2016 NR Monitor: http://www.orr.gov.uk/__data/assets/pdf_file/0016/22345/network-rail-monitor-2015-16-q3-4.pdf

6.   In this context we decided to take a closer look at NR's delivery to Southeastern for three reasons:

   a) 2016-17 was the second year in a row that the agreed performance strategy targets had been missed. In the previous year PPM was 3.6 pp below (worse than) target and CaSL was 0.9pp above (worse than) target (the longer term trend is shown in the overview section of chapter 3);

   b) there was a significant increase in NR's contribution to delay minutes – up 8.8pp in the last two years and the level of NR caused delay to Southeastern is higher than the number of NR caused delays for other TOCs; in 2016-17 NR caused 71% of all Southeastern delays[5] (this is a higher proportion than is typical for other TOCs[6]); this is usually about 60%; and

   c) compared to 2015-16, NR delay minutes increased by 29%. In contrast, all TOC caused delay (including TOC-on-TOC) was down 4%. As a result, NR has accounted for all of the increase in 2016-17 delay minutes.

1.4. Terms of reference for ORR's investigation

7.   This investigation focused on NR's current delivery of performance to Southeastern services, and whether there was evidence of any current wider systemic issues relating to performance delivery.

8.   On 26 April 2017, we wrote to NR setting out our intention to investigate its delivery of regulated performance targets to Southeastern services. This was designed to be a short and targeted investigation concluding by the end of June 2017. The full terms of reference are included in Annex E.

9.   We considered that focusing on NR's delivery to Southeastern services would allow us to look into the range of areas of concern for this service, which if not explored further could have longer term implications for Southeastern performance, and potentially

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[5] In this case 'delays' refer to the delay minutes that are measured through the Trust Delay Attribution system. This attributes delay to the party causing the delay.

[6] Both Heathrow Express and South West Trains have the same level of delay but this has been stable.

train performance across the wider South East route and beyond.

10. The terms of reference stated that we would consider the freight derailment at Lewisham (January 2017) when reviewing NR asset failures. This incident is still under investigation by ORR's Railway Safety Division. As the cause of the incident is still to be determined we decided that it should not be an area of focus in this report. However, we do consider the impact of this incident in Chapter 3.

11. Our investigation assessed a range of issues affecting performance. They included, but were not limited to:

- asset performance;

- impact of engineering works, in particular the Thameslink Programme (TLP); and

- NR's performance governance process.

1.5. Context of the investigation

12. In conducting our investigation, we considered the following evidence:

- passenger satisfaction results;

- periodic and end of year performance data;

- views and further information from the operator (Southeastern) regarding factors it believes influence performance;

- ORR's assessment of NR's approach to asset management in the route;

- ORR's assessment of NR's delivery of new infrastructure projects;

- NR's own views; and

- NR's delivery record as assessed under its own scorecard for Southeastern services[7].

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[7] NR has introduced route scorecards as part of its Annual Incentive Plan. The Scorecards are designed to link the interests of employees to those of NR as a whole and its stakeholders and customers. Each Route

13. Annex F provides a list of all key supporting documents and Annex G sets out the meetings held during the investigation.

14. NR, Southeastern, passenger bodies and funders have been very cooperative in providing a range of evidence and assisting us in carrying out our investigation. We are grateful for this cooperation.

Managing Director has a scorecard that has been agreed with their customers, the train operators, and which will be used to judge their end of year performance. They include a number of categories, one of which relates to train service performance. The July 2017 NR Monitor discusses route Scorecards in more detail.

2. Passenger impact and passenger satisfaction

This chapter provides context in setting out the impact on passengers and drawing out a sense of passenger dissatisfaction in relation to Southeastern services.

2.1. Passenger impact

15. In 2016-17, 182.4m passenger journeys[8] were made on Southeastern services. This represents 11% of all passenger journeys made in Great Britain (GB).

16. The number of journeys made on Southeastern services increased by 0.4% compared to 2015-16. In comparison, the total number of passenger journeys made in GB increased by 0.8% over the same time period.

17. Approximately 25.4m passenger journeys were 'late' as a result of a Southeastern train not reaching its destination within five minutes of its scheduled arrival time[9]. This includes approximately 7.4m passenger journeys affected by cancelled or significantly late trains.

18. Of the 25.4m journeys that were late, 4.4m resulted from Southeastern services not meeting its PPM target of 88.5%. Similarly, of the 7.4m journeys that were cancelled or significantly late, 1.5m were a result of Southeastern services not meeting its CaSL target of 3.2%.

2.2. Passenger satisfaction

19. The National Rail Passenger Survey (NRPS) conducted by Transport Focus provides a network-wide picture of customers' satisfaction with their train journey[10]. The results for Autumn 2016 were published on 24 January 2017[11], reflecting fieldwork carried out between 1 September and 20 November 2016.

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[8] Source: ORR Passenger Rail Usage 2016-17 Q4 Statistical Release
http://www.orr.gov.uk/__data/assets/pdf_file/0019/24832/passenger-rail-usage-2016-17-q4.pdf.

[9] This is considered a PPM Failure.

[10] National Rail Passenger Survey, NRPS, Autumn 2016 Main Report, Page 3.

[11] https://www.transportfocus.org.uk/research-publications/publications/national-rail-passenger-survey-nrps-autumn-2016-main-report/.

20. In Autumn 2016, overall passenger satisfaction for Southeastern was 77%, the same as Autumn 2015. This is compared to 81% nationally and 80% in the London & South East (LSE) sector. Overall satisfaction by TOC varied between 65% and 97%.

21. Passenger satisfaction results are also available at sub-operator level. In Autumn 2016, overall satisfaction for Southeastern High Speed Services[12] was 84% (down 9pp compared to Autumn 2015). Satisfaction for Southeastern Mainline services[13] was 78% and for Southeastern Metro service[14] was 75%, both showing no significant change since Autumn 2015.

22. Train punctuality and reliability is a key driver of passenger satisfaction, meaning that poor performance is likely to reduce the proportion of passengers that are satisfied with their journey, as illustrated in the figure 1 below.

Figure 1 – Southeastern PPM (periodic) compared to Passenger Satisfaction[15], 2012-13 to 2016-17

*Sourced from Transport Focus.

23. In Autumn 2016, passenger satisfaction with the punctuality and reliability of Southeastern services was 68%, the same as the previous year. This is compared to 69% in the LSE sector, which was down 6pp on Autumn 2015, and 73% nationally,

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[12] High Speed: Journeys on high speed trains to/from London St. Pancras.
[13] Mainline: Journeys on (generally) mainline Routes London – Kent lines.
[14] Metro: Journeys on rail lines that are within London.
[15] Overall satisfaction and satisfaction with punctuality and reliability for all Southeastern services.

down 5pp on Autumn 2015. Satisfaction with punctuality and reliability by TOC varied between 44% and 95%.

24. Results by sub-operator show that satisfaction with punctuality and reliability was down compared to Autumn 2015 for both Southeastern high speed (75% in Autumn 2016, down from 87% in 2015) and metro (68% in Autumn 2016) services. Whereas satisfaction with punctuality and reliability for Southeastern mainline services was the same as in Autumn 2015 at 67%.

25. As part of our investigation we sought the views of Transport Focus and London TravelWatch. Transport Focus provided quotes from passengers who travel on Southeastern (from the August 2016 NRPS), some examples of which are presented below[16].

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[16] The "word cloud" shows the words from the quotes. Words which appeared more frequently are biggest in size.

26. In summary, while overall passenger satisfaction on Southeastern services was unchanged from 2015, it was still lower than the national average. Passengers have been particularly frustrated with the punctuality and reliability of the Southeastern service, which is reflected in the passenger comments provided by Transport Focus. In the next chapter we examine how NR contributes to issues with punctuality and reliability.

3. NR's performance delivery to Southeastern services and NR asset performance

This chapter provides an overview of NR's performance in 2016-17 and the factors affecting delivery. It summarises the data that is available principally through the delay attribution process.

3.1. Context

27. Both NR and the train operator have some specific operational challenges that add to the difficulty of operating a very intensive passenger railway in this part of the country.

Operating to multiple London Termini.

28. Although operating to multiple termini helps during service disruption by providing diversionary routes, the relatively small number of approach tracks and platforms, combined with each line of route servicing multiple destinations means that disruption tends to have a disproportionate effect on train services.

The Thameslink Programme (TLP)

29. London Bridge station is currently being rebuilt in stages over a number of years to cater for more trains. This has had a number of effects. It has reduced approach lines to platforms at and calling patterns to/from London Bridge, Cannon Street and Charing Cross. This has reduced available infrastructure and presented operational constraints hindering NR's ability to manage delays and recover from significant events when they occur.

Maintenance activity

30. Normal maintenance activity, such as daylight track inspections, has had to be re-scheduled to night time operation, which can be more difficult and resource intensive. The introduction to the operational network of new track and signalling equipment assets (along with other assets) can also be disruptive and therefore brings risks to train punctuality, which need to be managed effectively. The TLP is resource intensive. It has drawn in some resource which would in normal circumstances be used on maintenance activities.

3.2. Outturn against target for PPM and CaSL

31. Following improvements in the second half of 2014-15, Southeastern performance declined sharply in 2015-16 and continued to decline steadily in 2016-17. As shown in Figures 2 and 3 below, Southeastern exited 2016-17 with a PPM MAA[17] of 86.1%, 2.4pp worse than its performance strategy target, and a CaSL MAA of 4.0%, 0.8pp worse than its performance strategy target.

Figure 2 – Southeastern PPM MAA including annual targets, 2012-13 to 2016-17
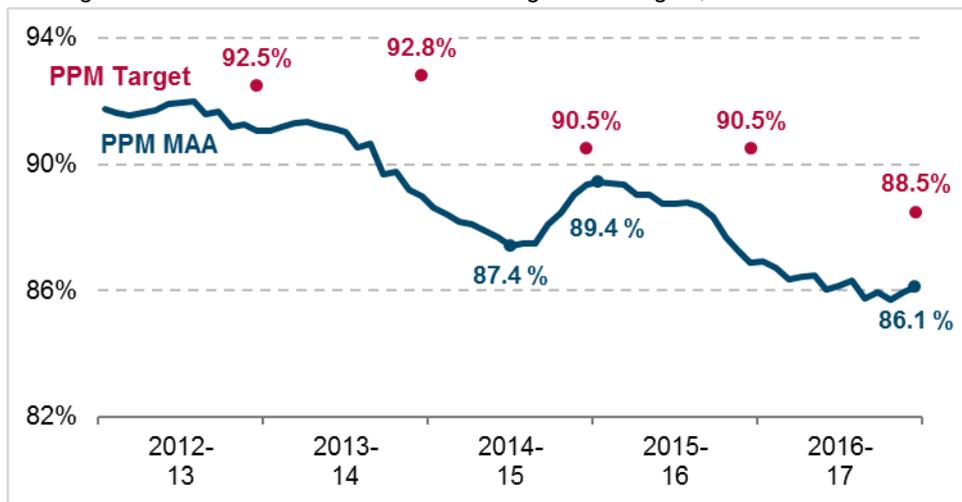
*Figure 3 – Southeastern CaSL MAA including annual targets, 2012-13 to 2016-17*

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[17] Moving Annual Average (MAA) is the outturn for the 13 periods ending with the specified period. The MAA for P13 represents the outturn for the whole year.

3.3. Attribution of delay caused by NR – overview minutes

32. As set out in Chapter 1, the level of NR caused delay was high in 2016 -17, with 71% of delay minutes. NR delay minutes represent the total number of minutes delay to passenger and freight trains, where the cause of delay is attributed to NR. One of the principal reasons for this investigation is that NR caused delay is high. Typically for other TOCs NR caused delays are around 60%.

33. Figure 4 below shows that overall, the increase in the number of delay minutes is largely driven by changes to the amount of NR caused delay. Both TOC-on-Self and TOC-on-TOC delay has remained stable whilst the level of NR delay has increased.

Figure 4 – Delay minutes (MAT[18]) attributed to Southeastern by cause, 2012-13 to 2016-17
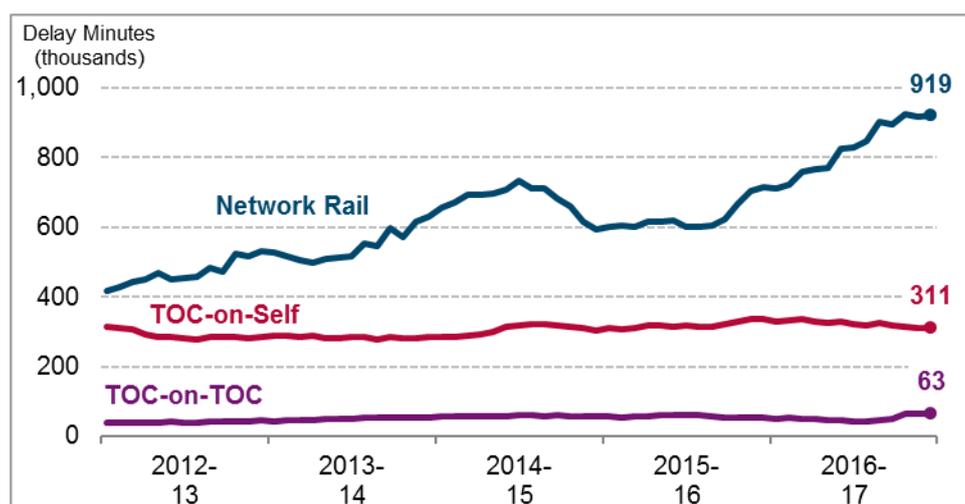
34. Before exploring the reasons behind this increase it is worth noting that in 2016-17 there were a number of significant (extreme) incidents over 5,000 delay minutes. Data provided by NR showed that the number of extreme incidents in 2016-17 increased from 17 in 2015-16 to 36 with a corresponding increase in delay minutes from 166,000 to 327,000. As illustrated below in Figure 5, significant incidents included: flooding; infrastructure issues following the August Bank Holiday engineering works; cracked crossings (e.g. North Kent East Junction) and the Lewisham freight derailment in January 2017. Autumn delays were also significant in period 9. The increase in delay associated with incidents less than 5000 minutes

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[18] Moving Annual Total (MAT) is the 13 period rolling total ending in the specified period.

increased at a much lower rate of c. 14%. This implies significant incidents had more of an impact than in previous years and highlights the challenge of service recovery and Delay Per Incident (DPI).

Figure 5 – PPM (periodic), 2015-16 and 2016-17, including large incidents
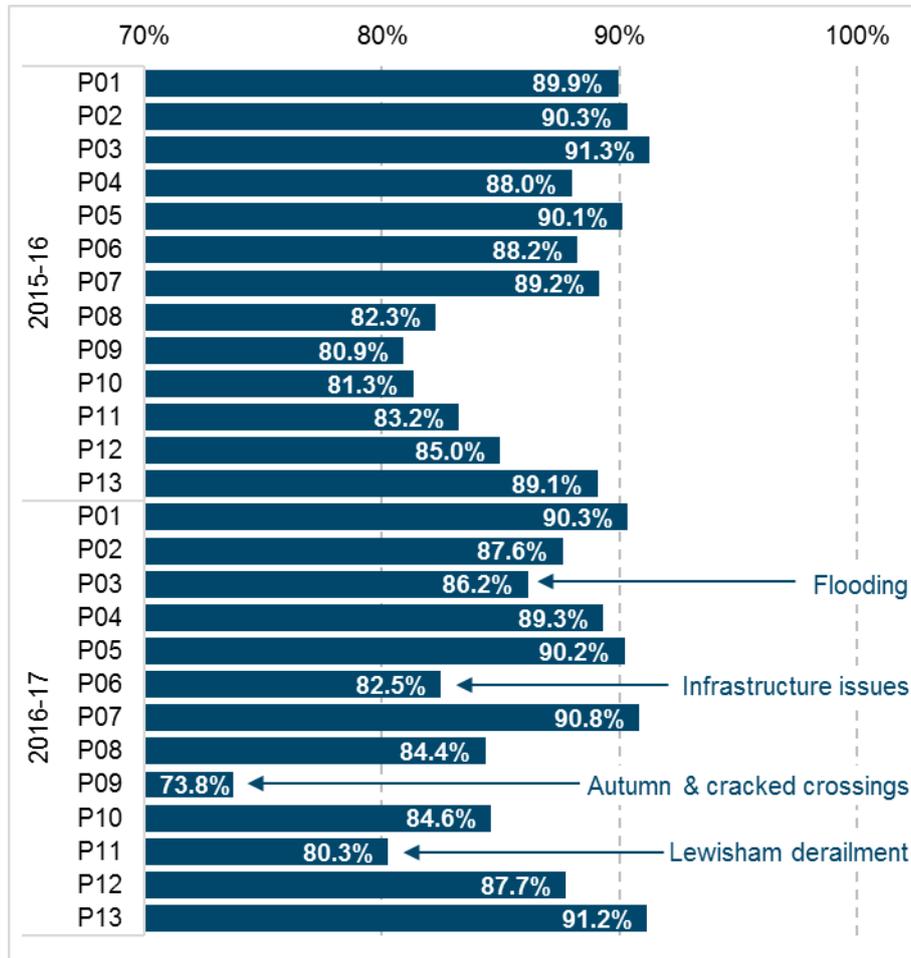
35. While we have taken account of these large incidents, for the purposes of this investigation we have assessed NR delay minutes by category to establish the areas that are having the greatest impact on performance.

36. As the level of NR delay minutes has increased the following section reviews each NR delay category to help identify the types of incident that are causing the greatest delays on the network and highlight areas of concern which are explored further in this report.

3.4. Attribution of delay caused by NR - by category

37. The accurate identification of the causes of 'Minutes Delay', Cancellations, Diversions and other events is important to allow all parties to whom delay is attributed to develop and implement action plans to improve operational performance.

38. As part of the delay attribution process the industry uses NR delay minutes. These are grouped at a high level, into five key categories:

   - **External Factors (External)** this includes areas such as vandalism, trespass and police activity;
   - **Severe Weather, Autumn & Structures (SWAS)** includes weather-related delays and issues with structures;
   - **Network Management/Other (NMO)** includes issues with NR operations and timetable problems;
   - **Non-Track Assets (NTA)** includes infrastructure such as points, train detection systems, points and power; and
   - **Track Assets (TA)** which represents issues relating to problems with the track.

39. In 2016-17, delay minutes for Southeastern across all of the above categories increased in comparison to 2015-16. As illustrated in figure 6 below, the largest increases were seen in NMO – this increased by 39% (or 93,000 delay minutes); and NTA – this increased by 25% (or 57,000 delay minutes). These two categories collectively contributed 73% of the increase in total NR delay minutes. These categories therefore form a significant focus for our investigation.

Figure 6 – Delay minutes (MAT, thousands) by NR cause category, 2012-13 to 2016-17
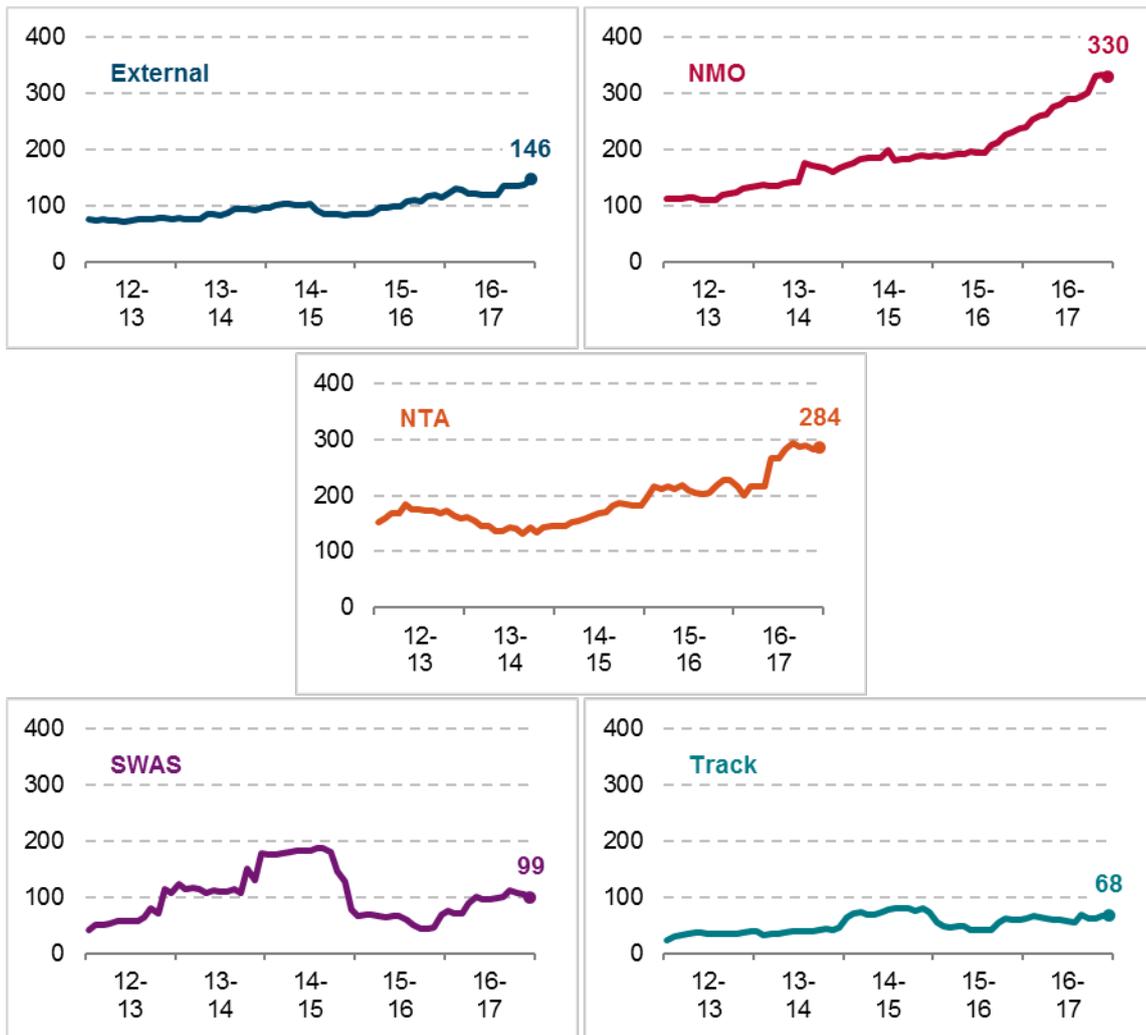
40. The following sections review each NR category listed above in more detail.

External Factors (vandalism, trespass and police activity)

41. External Factors saw an increase of 31,000 delay minutes compared to 2015-16, with it now accounting for 15% of NR delay Minutes.

42. The single largest increase, 19,000 delay minutes was External Other, with Security Alerts generating 12,000 delay minutes throughout the year. This was overwhelmingly driven by the evacuation of London Bridge in March 2017. This single incident was responsible for around a third of the total increase in External factors delay minutes.

Severe Weather, Autumn & Structures (weather-related delays or structural issues)

43. Severe Weather, Autumn and Structures (SWAS) saw an increase of 17,000 delay minutes compared to 2015-16, accounting for 10% of NR delay minutes.

44. Severe Weather (Beyond Design Capability of Infrastructure) delay minutes increased by 25,000 while Other Weather (Impact on Infrastructure or Network Operations) saw a 19,000 delay minutes improvement. Low Adhesion including Autumn saw an 8,000 delay minutes increase. The biggest "weather" event of 2016-17 was Storm Doris in February 2017. This storm caused considerable delay to Southeastern and other operators nationally.

Network Management/Other (delay attribution, operations and timetable)

45. NMO saw an increase of 93,000 delay minutes compared to 2015 -16, with it now accounting for 36% of NR delay minutes in 2016-17. This was principally driven by an increase of 71,000 delay minutes in what is known as 'Unexplained' delay'[19], which may mean some delay causes are understated. Un-investigated Delay increased by 8,315 delay minutes and Commercial Takeback/Other[20] also increased by 17,432 delay minutes. Chapter 5 explores the reasons behind the rise in delay minutes in the Commercial Takeback/Other category and sets out the measures that NR has introduced to reduce the level of delay attributed to this category.

46. Under NR Operations, Signalling was the second largest area of delay, contributing 72,000 delay minutes, although this was largely consistent with the previous year.

47. Delays associated with possessions have also risen. Other Possession Related Delays, Possession Over-Runs and Related Faults and Track Patrols & Related Possessions collectively saw an increase of 14,000 minutes (70%) on the previous year. This highlights the criticality of managing maintenance, renewals and enhancements works effectively and understanding the impact of this on operational

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[19] Unexplained delay is typically delays of less than three minutes which are not investigated further.

[20] Delay accepted by Network Rail as part of a commercial agreement where no substantive delay reason is identified.

performance. We discuss NR's management of maintenance, renewals and delivery of enhancement projects further in Chapter 4.

48. More positively, four NMO categories recorded an improvement on the previous year. Vegetation Management Failure saw the largest improvement, recording a reduction of 14,000 delay minutes.

Non-Track Assets (points, train detection systems, points and power)

49. In 2016-17, 284,000 delay minutes were attributed to non-track asset causes, accounting for 31% of NR delay minutes. Overall, NTA delay increased by 57,000 delay minutes compared to 2015-16.

Figure 7 – Non-track asset delay minutes (MAT), 2012-13 to 2016-17

50. As shown in Figure 8 below, this increase was largely driven by increases in delay associated with third rail faults, points failures and signalling system/power supply failures.

Figure 8 – Proportion of delay minutes (MAT) in each NTA category, 2015-16 and 2016-17
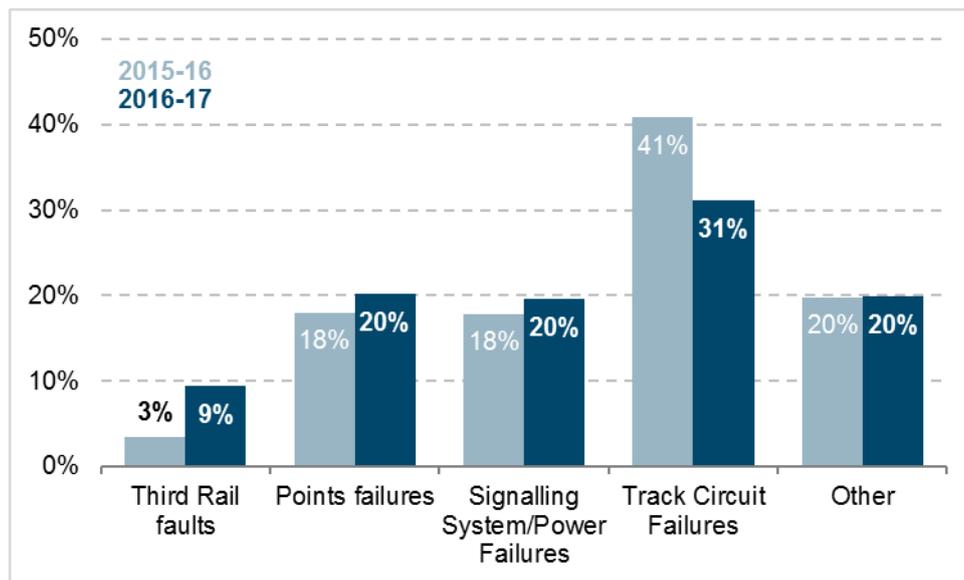
51. There was also a 5% increase in train detection delay as the balance of Axle Counters (9,000 delay minute increase) and Track Circuits (which caused fewer delay) changed. This was largely as a result of Axle Counters installed as part of Phase 1 and Phase 2 of the East Kent Re-Signalling project. In contrast, Signal Failures saw an 8,000 delay minutes reduction.

52. There are many factors that can affect the amount of delay incurred from any particular incident, including type of failure, time of day or service intensity. To control for some of these factors, the number of incidents can be used to measure asset performance. Effective management of the asset should result in a stable or decreasing number of incidents.

53. The total number of NTA incidents decreased in 2016-17, down 24% from the peak of 2,193 in the 13 periods ending P03 2015-16.

54. The number of incidents caused by track circuit failures, cable faults, points failures and third rail faults has also decreased. These failures usually cause a large amount of delay as illustrated in Figure 9 below.

Figure 9 – NTA Incidents (MAT) including large delay incidents, 2012-13 to 2016-17

*Incidents caused by track circuit failures, cable faults, points failures and third rail faults
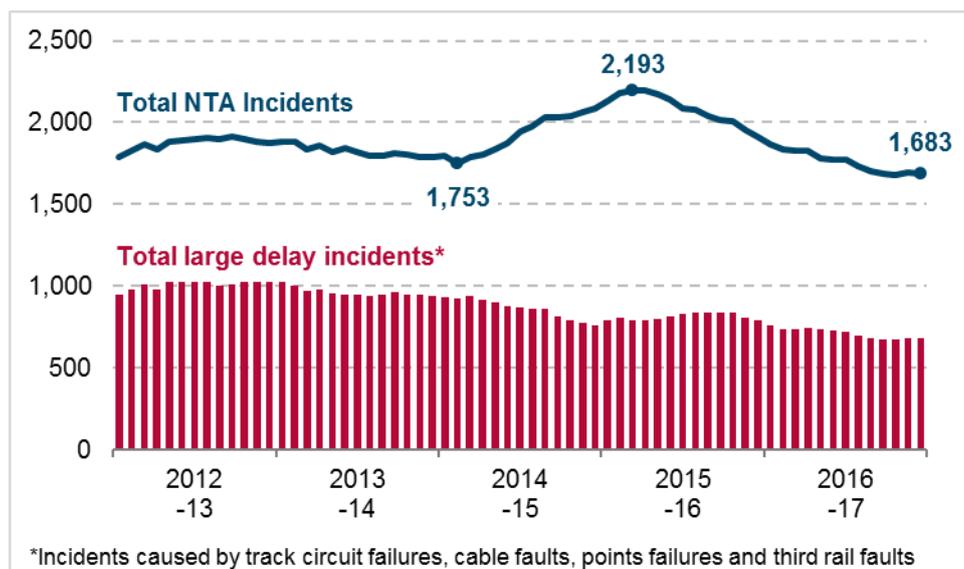
55. The rise in incidents during 2014-15 was a result of interference from mobile phone installations affecting NR's GSM-R telecom system (telecom incidents increased more than seven fold over the course of the year). This is a national issue affecting all routes however there is a known technical solution currently under trial[21]. Removing telecoms incidents the Moving Annual Total (MAT) for NTA is now lower than at any time since 2011 and 19% lower than at a peak in P11 2015-16.

56. There was a 24% reduction in the number of points failures in 2016-17 compared to the previous year. NR's analysis of the Mean Time Between Service Affecting Failure (MTBSAF) of points in Kent[22] shows a positive trend with Kent constituting one of the two the top performing areas, achieving nearly eight years between service affecting failure, compared to the national average of just over six years.

57. The increase in delay minutes alongside a stable or decreasing trend in the number of incidents leads to an increase in the average DPI for NTA. In particular, the DPI for track circuit failures has been increasing steadily since the middle of 2015-16. Chapter 5 sets out the steps that NR is taking to improve service recovery time from significant incidents to reduce DPI.

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[21] http://www.era.europa.eu/Core-Activities/ERTMS/Pages/Interferences-information.aspx

[22] Kent Route can be used as an approximation for Southeastern services as the majority of services on Kent are Southeastern.

Track

58. Delays from track faults saw an increase of 7,900 delay minutes compared to 2015-16, with it accounting for 7% of NR delay minutes.

Figure 10 – Track delay minutes (MAT), 2012-13 to 2016-17

59. Overall, track delay increased by 6,900 delay minutes compared to 2015-16. This was driven by an increase in delay associated with Temporary Speed Restrictions (TSRs):

- Reactionary Delay[23] to P-Coded TSRs[24], increased by 10,000 delay minutes; and
- TSRs due to Condition of Track (COT) increased by 4,000 delay minutes.

60. Delays from track faults including Broken Rails decreased by 8,000 delay minutes. Despite some of the significant increases witnessed in this category, the improvement in Track Faults (which forms nearly three quarters of Track delay) offset the other negative trends highlighted.

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[23] Reactionary delays are delays caused to other train services following an incident they were not directly involved in.

[24] P-Coded TSRs refer to those TSRs which typically apply following the completion of engineering work.

Figure 11 – Proportion of delay minutes (MAT) in each Track category, 2015-16 and 2016-17
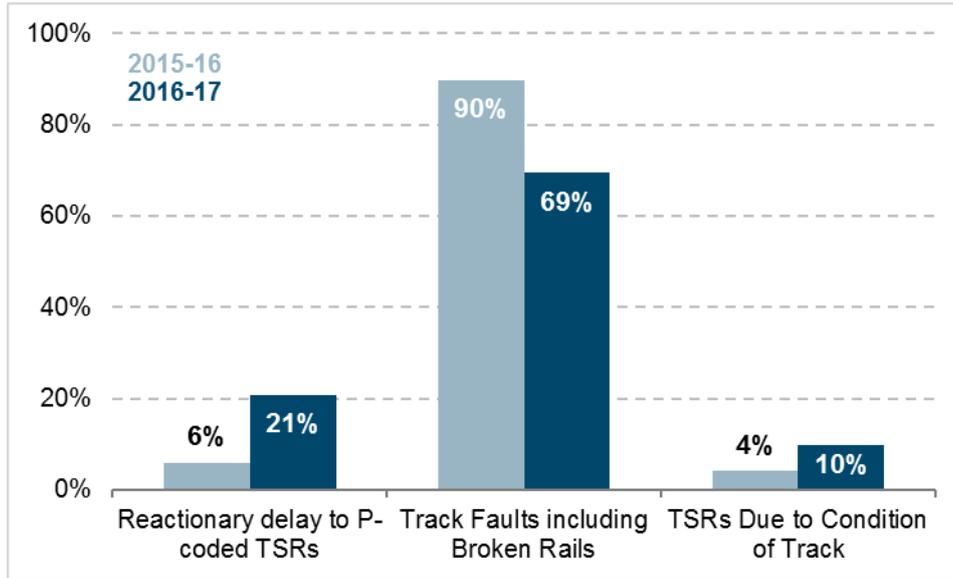
61. As for NTA, inspecting the number of incidents attributed to track categories can help assess performance of the assets.

62. The total number of track asset incidents increased to 503 in 2016-17[25]. This has increased steadily since P08 2015-16, which saw the lowest number of incidents since the beginning of 2012-13.

63. There has been significant increase in reactionary delay to P coded TSR's, from a very low base in 2015-16. More recently, in last three periods of 2016-17, there has also been an increase in delay resulting from TSRs due to COT. The impact of these TSRs is variable and dependent upon what else is affecting the Route at the time.

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[25] Data sourced from the Trust Delay Attribution system.

Figure 12: Track Incidents (MAT) including TSR delay incidents, 2012-13 to 2016-17
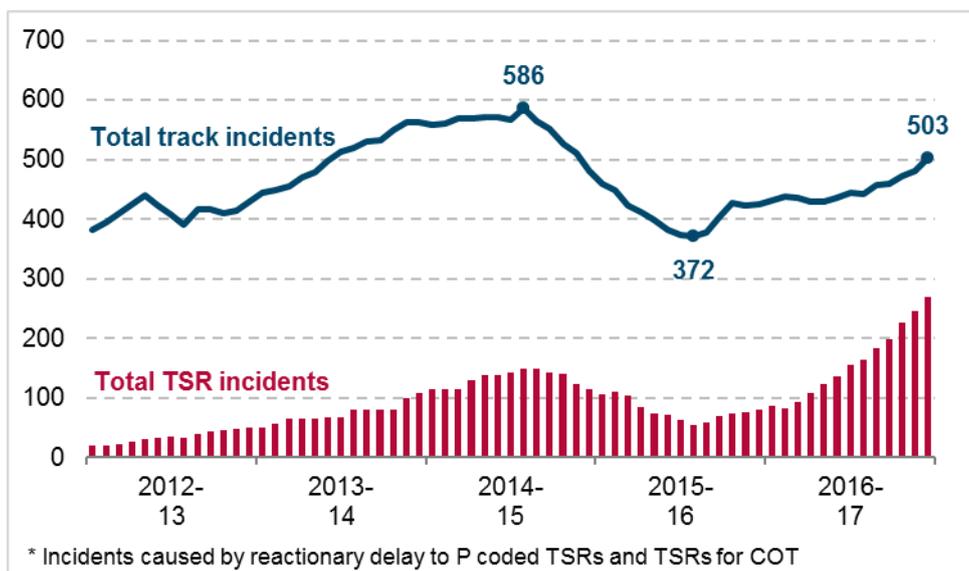
64. Given the increase in reactionary delay to P-Coded TSR (which typically apply following completion of engineering works), Chapter 4 explores the impact of NR's delivery of engineering works (particularly major projects) on its delivery of operational performance to Southeastern.

65. In light of the increase in COT TSRs, Chapter 4 also assesses NR's approach to maintaining and renewing its assets.

4. Impact of engineering works

This chapter explores the impact of NR's delivery of engineering works (particularly major projects) on its delivery of operational performance to Southeastern.

4.1. Background

66. Delivering engineering work on the rail network is disruptive and the consequential impact on train performance can be significant. To carry out upgrades NR often needs to take possession of the track and lineside infrastructure to create a safe environment in which to deliver work. Significant volumes of work may necessitate periods of access longer than the readily available over-night periods when services are not running. This can mean utilising lengthy blockades when whole sections of track are closed for several weeks, or extended possessions when NR may require just a few more hours to deliver work.

67. The longer-term impact of an enhancement on train performance should however be positive. New and upgraded assets should be more reliable than those they replace, needing less maintenance and (in theory) being less likely to fail (although new assets can have initial teething issues). In addition, the outputs delivered by an enhancement may directly relate to more frequent, longer or faster train services, each of which can have a positive impact on performance. Outputs are typically staggered across a control period in line with timetable changes; incremental benefits may be achieved relatively early on, rather than delivered in a single block in the final year.

68. The South East Route, carries 25% of all GB passenger journeys. Along with Wessex, this is arguably the most constrained area for engineering work on the GB rail network. The intensity of the service and number of passengers means that there is little resilience in the system. When faults occur or possessions overrun, this has a significant impact on train performance. NR's appetite for risk in this area could therefore be lower than other routes. NR has confirmed that managing this risk incurs additional cost by necessitating the provision of additional assurance that

possessions finish on time. NR advise that this can be achieved through additional supervisory resources during the possession, spare redundant plant, or more 'float' at the end of the possession. In addition, every single asset needs to be returned to the operation in good working condition as any failures could lead to serious delays to the Route.

69. NR is responsible for delivering several enhancements to the infrastructure along the network on which Southeastern services run. The most significant of these is TLP, a multi-billion-pound programme spanning Control Period 4 (CP4) and CP5 that will provide additional capacity to the network north and south of London. The scope covers platform extensions, station remodelling, associated infrastructure upgrades and the introduction of new types of rolling stock. The work spans a large geographic territory and covers some of the busiest sections on the GB network, including the Key Output 2 works around the remodelling of the track through London Bridge low level station.

70. Other CP5 enhancement projects on the route included Gravesend Train Lengthening which interfaced with TLP and provided longer platforms at Gravesend station and East Kent Re-signalling which provided capacity for longer and more frequent services. Both of these are now complete. All Kent power supply upgrades are due to be completed in 2017, except for one upgrade at Tunbridge Wells which is scheduled for completion in 2018. NR has confirmed that this will enable 12 car services on metro lines and enhanced performance resilience. There are also a number of traction power supply upgrades underway which will improve capacity on the network. While these have interfaces with TLP they do not generally involve work to rail infrastructure and so should not have an impact on train performance.

71. As described in Chapter 1, one of the key areas of this investigation is to determine whether Infrastructure Projects (IP), the organisation within NR responsible for engineering works, has been doing everything reasonably practicable to minimise performance disruption to Southeastern services. We have considered a range of evidence provided by NR to assist us with this element of our investigation:

- Overall Project Management Plan;

- Engineering Access Strategy;

- Quantitative Cost Risk Analysis (QCRA) Report;

- Programme Plan;

- Financial Reports;

- Any Periodic Reporting that details possession overruns and impact; and

- Feedback from the operator offering their view of the efforts NR has taken to minimise disruption in its delivery of enhancements.

72. Section 4.3 of this Chapter considers the impact of engineering works on performance and in particular reviews NR's programme for access, NR's engagement with its stakeholders, the direct impact that enhancements have had on Southeastern performance in 2016-17 and also the indirect impact of enhancements on performance. However before covering those areas it is important to articulate what the IP function is and what it is responsible for.

4.2. Role of Infrastructure Projects

73. Under NR's operating model, the IP function is part of the Route support directorate. It is responsible for development, design and delivery of enhancements and renewals specified by the Route and signed off by the Director Route Asset Management (DRAM) team (apart from TLP scope where in most cases the project was given delegated powers to specify without Route approval). The IP function is split into four separate departments that have differing interactions with the NR Route, including:

- **Major Projects** are responsible for delivering TLP and other major projects across the network;

- **IP Southern** deliver Civil Engineering Projects, Enhancements and Electrification and Plant work;

- **IP Signalling** deliver Major Signalling Renewals. These projects tend to be large, complex and infrequent, and therefore have long lead times and necessitate considerable amounts of planning; and

- **IP Track** is split into three areas, High Output, Plain line and Switches and Crossings (S&C):

- o S&C is similar to IP Signalling, in that it provides large infrequent projects that take considerable planning; and

- o High Output and Plain line deliver track renewals. High output track renewals allow NR to replace more track while allowing trains to run safely on adjacent lines, minimising disruption to services. This comes with certain operating requirements, such as starting on time which is essential to ensure on time completion. The Route has a very low tolerance for risk with regard to high output track renewals, and provide extra confidence of on time completion, either through additional resource or float in the time allowed.

74. Where appropriate, throughout this chapter we discuss the relationship between the Route and IP.

4.3. Impact of engineering works on performance

75. The following section reviews the impact engineering works have had on performance. Given one of the most significant enhancement projects on the Route is TLP, we decided to focus on this as a case study of whether there is a robust programme for access, how effectively NR engage with Southeastern in developing and delivering the project and finally what the overall impact of TLP has been on performance.

76. As this chapter covers the impact of engineering work it is also important to consider how well NR is maintaining and renewing its assets as this can also impact on performance, this is considered further toward the end of this section.

Access

Does the programme have a robust programme for access and has it been used effectively?

77. The TLP Construction and Staging Strategy was originally developed in 2011 and remains a live-working document, with the most recent revision updated in November 2016. This strategy was discussed and agreed with NR Operations, train operators, contractors and the DfT and is subject to on-going consultation and change control. In addition, an Operations Forum has been established for TLP to co-ordinate the

network change being delivered by the programme and keep all relevant stakeholders informed and engaged.

78. The Staging Strategy sets out the key principles and assumptions that underpin the phasing of construction on TLP Key Output 2[26] and how and when access will be required. It also highlights the constraints the construction teams will be working under, particularly the need to maintain up to 24 trains per hour during construction and the fact that facilities for perturbation will be extremely limited (i.e. in the evident of an incident there will be limited alternative routes for trains to take and the impact on performance will be significantly exacerbated). This again indicates an emphasis on the need to avoid overruns.

79. The TLP has successfully delivered against this strategy with no material slippage. Individual possessions have been rescheduled, however the major blockades have been delivered as planned and the outputs are on time. This indicates that initial development work was robust and that based upon accurate forecast productivity rates NR was able to plan the amount of disruptive access required to deliver the upgrades, including building in suitable contingency periods.

80. The TLP is also currently significantly below its Schedule 8 Budget (compensation paid to operators in the event of unplanned disruption), indicating that the programme is below the potential levels of disruption initially forecast.

Engagement

Does NR work effectively with the Southeastern in planning and delivering access?

81. We received feedback from Southeastern on the manner in which the TLP has managed performance and how they have engaged with operators in developing and delivering the project. Their feedback has been generally positive:

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[26] Key Output 2 is the provision of up to 24 train paths per hour between St Pancras International and Blackfriars stations by December 2018, infrastructure to support up to 18 trains per hour through the London Bridge corridor, extra stabling, connections to train care depots, the extension of services onto the East Coast via Canal Tunnels and improvement of passenger facilities at London Bridge.

- Southeastern is satisfied with the level of engagement they have received from both IP and the Route. It singled out TLP in particular and noted that there is dedicated resource for this within Route and project teams. It cited TLP's management of change control, its advance warning and flexibility over access arrangements;

- It noted the significant reduction in the number of possession overruns in the past year and welcomed the robust measures NR has put in place to manage the risk of overruns in terms of amount of planned work and management / monitoring throughout the work. Southeastern raised a concern that NR may have been overly risk-averse in reducing project work to avoid overruns, potentially resulting in longer term implications and an extension of the overall programme to deliver the scope;

- Due to NR's close monitoring of site-progress, Southeastern has received sufficient advance warning of any potential overruns in recent periods; and

- It confirmed that where speed restrictions were necessary following engineering work they were usually planned and they had received plenty of advance warning.

Direct Impact on performance

What was the direct impact of enhancements on Southeastern performance in 2016-17?

82. The largest incident associated with the TLP in 2016 was multiple points failures at London Bridge in August and September. Over a two-week period four critical assets failed in close succession and were collectively responsible for over 25,000 delay minutes. The points that failed were installed in December 2015 in preparation for the re-opening of platforms and the introduction of a new timetable. Prior to August these points saw very little use (NR has confirmed on average 13 swings a week) although NR did recognise that they would have an increasing pattern of use post August 2016 and preparation testing and health checks, including quarterly inspections and remote condition monitoring, were carried out accordingly.

83. Subsequent inspection identified that two of the failures would not have been identified during inspection (as they were due to failed components that were not normally examined during routine maintenance) and that two of the failures were probably caused by failure to correctly reconfigure the assets post inspection.

84. A detailed lessons learned exercise was held following the points failures in August 2016 and reports were produced, focussing primarily on asset management inspection and maintenance of new assets. Although the failures were not caused by the enhancement project, TLP had installed the new assets and it was important they were involved in the lessons learned, particularly with a view to supporting the Route in the bedding in of new assets or of assets that will have long periods of little or no usage (sleeping assets). Changes have since been implemented to maintenance regimes and training based around the findings of the lessons learned report and efforts taken to optimise the performance and reliability of points.

85. For the purposes of this investigation, NR provided ORR with data to demonstrate the impact that TLP had on Southeastern's performance. This showed that in 2016-17, TLP was directly responsible for 11,324 delay minutes, of which 10,493 affected Southeastern services and 11,319 in the South East Route area. This represents 0.45% of the total of 2,513,957 NR delay minutes on the South East Route in that year. This was a significant improvement on 2015-16 when TLP was responsible for 61,258 delay minutes, with 58,895 of these in the South East Route (making up 2.89% of the Route total) and 2014-15 when the programme caused 56,268 delay minutes in the South East Route (making up 3.28% of the Route total). This represents an encouraging trend of reducing impact on performance that corresponds with both the maturity of the project, the advanced state of works and lessons learned from previous failures.

86. TLP's access plan in 2016-17 was for 15>28 hour possessions, 30<28 hour possessions and 350 mid-week night Rules of the Route possessions with four working days affected over the August bank holiday week. The vast majority were delivered successfully with only four overrunning in this timeframe resulting in 2,818 delay minutes. It is worth noting that NR's data confirmed that there were 7

possession overruns in 2015-16 and 21 in 2014-15, again pointing to a positive trend in delivering work on-site.

87. NR's data confirmed that post-implementation asset failures were a larger issue, contributing to over half of the delay minutes incurred in the year. The majority of these minutes were down to a single incident in June 2016 when a lineside signalling cable failed following installation and caused 5,362 delay minutes. It is again worth noting that the figure for 2016-17 is a major improvement on the preceding years, with over 45,000 delay minutes in 2015-16 caused by post-implementation failures and 34,000 in 2014-15.

88. From the documentation supplied by NR there is evidence of good programme, project and construction management in place to co-ordinate activities, keeping the client, customer and other stakeholders informed and minimising the potential for overruns. Due to the very high volume of possessions and isolations required by the programme, TLP established an in-programme route access team with all of the necessary resources to plan and take possessions as well as the dedicated equivalent of Operations Managers to manage and respond to incidents. This team also manages a central "Command Room"[27] that is in place for all red-ranked, critical work. Construction diaries provide evidence of the close levels of scrutiny applied to on-site work and contractor performance and it is evident there is an emphasis on utilising engineering access as effectively as possible and avoiding unplanned disruption at all costs.

89. NR also provided detailed evidence of scrutinising and monitoring the impact of the programme on performance, including weekly possession summary reports, periodic engineering access strategy reports, on-site construction diaries and investigation reports into incidents. The programme compiles analysis on performance every period and these are standing items in the reports to the Department for Transport (DfT) and its TLP Programme Board, which includes TOC representatives.

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[27] A central command room used to coordinate and communicate critical performance activities.

90. The evidence provided by NR demonstrates that the impact of TLP disruptive access on Southeastern train performance in 2016-17 has been minimal (although we note this does not include planned diversions for planned engineering work which has disrupted passenger journeys, especially at weekends) and there has been a trend of reducing disruption since the beginning of the control period. This has been corroborated by feedback provided by Southeastern. This is despite the fact that the overall volume of possessions remains steady and the project is still delivering work on complex and busy sites, and on infrastructure critical for high volumes of traffic. This indicates that the reduction in delay minutes is not down to a decreasing volume of work but has instead been brought about by the increasing maturity of the project organisation, implementation of lessons learned from incidents earlier in the Control Period and the level of resource TLP, as major programme, is able to call upon. NR has demonstrated that it is applying appropriate levels of scrutiny to its on-site delivery organisations and that operators are fully involved and engaged in the process of planning and taking track access.

91. As well as TLP there are a number of other enhancements either underway or completed in Sussex and Kent in CP5 that may have had an impact on Southeastern's operations:

   Sussex
   - Sussex Traction Power Supply Upgrade – work done to the Distribution Network Operator's (DNO) assets, delivered by the DNO;
   - Redhill Additional Platform – major interface and interdependency with TLP;
   - Uckfield Train Lengthening – completed July 2016; and
   - Victoria Station Capacity improvements – deferred into CP6.

   Kent
   - Kent Traction Power Supply Upgrade – work done to the DNO's assets; delivered by the DNO;
   - Route 1 Power Supply Enhancements - work done to the DNO's assets, delivered by the DNO. There is no rail interface;
   - East Kent re-signalling – completed April 2016;
   - New Cross Grid – power supply work, only a limited railway interface; and

- Gravesend Train Lengthening – completed May 2014.

92. The majority of these projects can be discounted from the list of possible disruptive events during the period under review; as they have either already been completed, have been deferred into the next control period or are not delivering upgrades to line-side infrastructure. The focus of this review has therefore been on the TLP.

Indirect impact of Thameslink

What was the indirect impact of enhancements on Southeastern's performance in 2016-17?

93. We met with NR in March 2017 to review performance. One of the major issues NR referred to was the increase in reactionary delay in the Kent Area, and at London Bridge in particular. We consider this may be, to some extent, an indirect impact of TLP.

94. After excluding major incidents to provide a better view of this increase, NR say it is now experiencing 21% more reactionary delay for every minute of primary delay across the Route. In the critical approaches to London Bridge this increase was more than 130%.

95. This step change in reactionary delay coincides with the timetable and infrastructure changes which took place over Christmas 2015 and which were associated with the TLP. This reduced the approach tracks to and from Major London Termini as well as the number of available platforms. With less infrastructure available, recovering the train service is more difficult, and as a result when delays occur, it is a challenge to return to the timetabled service. This is highly likely to be the driver of higher reactionary delay, and in turn worse performance.

96. This information has driven NR's focus on the 0 to 8-mile corridor from Cannon St / Charing Cross, which has seen a 30% reduction in infrastructure incidents. There has been considerable attention given to the London Bridge Delivery Unit (DU) which covers this corridor. It has adopted Lean techniques to improve how it manages assets. This includes using structured problem solving techniques such as the five

whys and fishbone diagrams to understand the true root causes of incidents. Part of the philosophy is to take a joint approach amongst the asset teams to resolve problems – a notable innovation is to map out all recent defects from across the asset disciplines, which helps identify the problem locations and in turn the underlying problems, enabling solutions to be better developed.

97. This technique is used at weekly sessions and to enable issues such as TSRs to be prioritised. A representative from Southeastern attends these sessions which ensures the operator's views are considered.

98. There is also a weekly visualisation session where managers discuss business goals (for example safety, performance etc.). These are held to increase the focus on delivery. The visualisation sessions take place across and organisation, with there being several tiers, from managing director level downward.

99. The DU has recently invested in a replica set of points, colloquially known as the 'sandpit' – this provides a live training environment to better train response teams. It is also used to model how different asset response teams can work together to improve co-ordination and team working.

100. The DU has also created dedicated response teams. The response teams do not undertake any maintenance activity, their sole focus is to respond to incidents. Their training and competence is improved by on-going training in the sandpit referred to above.

101. ORR visited the London Bridge DU in 2016 and more recently as part of the investigation and noted the positive progress made by NR in this area.

Maintenance and Renewals

How well is NR maintaining and renewing its assets?

102. The nature, intensive use, age and condition of the assets in Kent mean that it is vulnerable to failure. In Chapter 3 we reviewed NR delay minutes in 2016-17 which confirmed that while there had been an increase in COT TSRs, NTA and TA incidents had decreased. Taking this into account, when looking at NR's approach to asset management we found that NR is approaching the challenges in a positive

manner and is serious about improving the situation, reducing incidents and the associated delays.

103. From various discussions with the Route Team during the investigation it was clear that NR has responded to the challenges posed by a congested network with some ageing infrastructure. The actions it has been and is undertaking include reviewing response teams, response processes, spares, training, fault mapping, rolling out good practice, active involvement from the Route Asset Engineering teams, prioritisation of works based on performance impact, reorganising and creating new posts, and strengthening the interface with projects. NR also has a regular COT TSR review to manage the removal of TSR's and is focused on identification of potential TSR's. We consider these actions have enabled the reduction in the incident count, improvement of the CRI and formulation of action plans to address areas of weakness, both in terms of asset and incident response. NR also has robust processes in place (such as training, preparedness, organisation - to respond to asset failure).

104. While we consider that NR is taking all reasonable steps at this time, one of the principle changes from the Hendy Review[28] was for NR to reduce renewals activity for the remainder of CP5 (so that funds could be reallocated to address the increase in enhancement expenditure). A reduction in renewal activity could ultimately result in an increase in incidents, TSRs or deferrals on the Route. Although NR has confirmed that this should not be considered an immediate risk to Southeastern's performance, we consider that, going forward, effective prediction of failures will be of increasing importance. As funds are restricted for the remainder of CP5, NR is encouraged to continue to make use of the full range of its prediction capabilities and to look for new, innovative ways to manage condition of track and other failures.

105. Effective sharing of best practice is also essential. During this investigation we identified that the sharing of best practice from other routes could be better.

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[28] The Hendy review: https://www.networkrail.co.uk/who-we-are/publications-resources/our-plans-for-the-future/the-hendy-review/

106. Finally, in Chapter 3 we also noted a reduction in delay minutes attributed to vegetation management. This reduction is welcome, however we are aware that vegetation management continues to be an issue and is an on-going problem across the rail network. Our investigation found that the Kent Route did not have a single point of control for vegetation management. Such a position would help promote smart and efficient ways of working, such as using on train video recording, to identify and tackle areas of concern.

107. At the start of this chapter we discussed the different IP functions. While for TLP the relationship between IP and the Route has improved we wanted to understand how effective the relationship was between IP Southern, IP Signaling, IP Track and the Route.

108. The Route previously considered that there was a lack of co-ordination between it and IP Southern, however there has been some evidence of improvement. For example, weekly visualisation sessions are held between the Route Asset Manager (RAM), Programme Managers and Sponsors; along with planning status meetings, which are a supplement to the Governance for Railway Investment Projects (GRIP) process[29]. NR has confirmed its governance arrangements for IP Southern are now recognised as best practice.

109. Plain line track renewals however have posed challenges to the Route. Colas now deliver this work, taking over from Balfour Beatty. The change in contract has caused some difficulties but this appears to have improved in recent months. The Route has a perception there is a lack of pain/gain sharing, with this part of IP not being as exposed to the performance of the network as the Route. An example of this is engagement with the Route Scorecard, which only has volume as a measure for their success. Therefore the consequence of any overruns and the additional cost required to eliminate overruns is not borne by the project team.

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[29] NR's management and control process for delivering projects on the operational railway.
 http://archive.nr.co.uk/aspx/4171.aspx

4.4. Summary of conclusions

110. The relationship between Route and IP has matured, therefore technical issues that have arisen have been resolved. In the past year TLP has demonstrated that key lessons have been learned from earlier performance issues and that it is now engaging far more closely with operators to plan access and deliver construction work. Southeastern is satisfied that TLP is working to minimise delays, to the extent that it has concerns regarding NR reducing the workload it is delivering during a possession in order to avoid potential overruns. It is also satisfied with the overall level of engagement and input they have with IP and the Route. There is evidence of robust access planning, with the works on schedule, the programme adhering to its initial access strategy and remaining within the Schedule 8 budget. NR has demonstrated it is applying close-scrutiny to its contractors to ensure they are successfully delivering work on site and handing back infrastructure in a timely manner delivered to high quality.

111. The reduction in the direct impact of TLP through possession overruns and equipment installation issues is consistent with the conversations held with industry. Some increase in reactionary delay is to be expected as an impact of withdrawing infrastructure, particularly in a critical artery around London Bridge which will always lead to incidents being larger through higher reactionary delay.

112. From the available evidence gathered and assessed, it would suggest that while there has been some indirect impact such as reactionary delay as a consequence of new infrastructure, enhancement projects have not had a major negative impact on performance in 2016-17. During the investigation we established that considerable attention is given to improving NR's response to incidents.

113. Delivery of TLP will continue to present a risk to train performance on Southeastern's network across the remainder of CP5 with further possessions planned throughout 2017 and 2018, including at London Bridge station. The programme's track record in delivering against its Construction Staging Strategy, the close-co-operation it has with operators, the client and route-based stakeholders and the recent improvements in reducing post-implementation failures and possession overruns indicates TLP is well placed to manage these challenges.

114. NR is responsible for delivering a high-profile portfolio of major enhancements in CP5; while some schemes have been delivered on time and within budget, its overall performance has been characterised by significant overspends and programme slippage. It is important that lessons learned from TLP are shared within the broader organisation, particularly in relation to the co-operation between operator, IP and the Route in planning and delivering access and in the asset management of new infrastructure in the months post implementation. In addition, the best practice evident in the 2016-17 possession management and the avoidance of delays caused by engineering overruns will be of interest to major schemes elsewhere in the GB, particularly where access is at a premium and there is already pressure on train performance. It will be important going forward that NR ensures effective cross-organisational co-operation within its devolution of responsibilities to its routes to prevent the risk of repeating mistakes made elsewhere on the network.

115. When looking at NR's approach to asset management (i.e. its maintenance and renewal of assets) we found that NR is approaching the challenges in a positive manner and is serious about improving the situation, reducing incidents and the associated delays. While there are on-going issues with TSRs on the Route, our engagement with NR and scrutiny of its processes has given some assurance that it is taking reasonable steps to try to minimise the number of TSRs on the network.

116. We consider that going forward effective prediction of failures will be of increasing importance, particularly as funds associated with renewals are restricted for the remainder of CP5. We also consider that the sharing of best practice from other routes could be better and there are steps that NR could adopt to drive further improvements in its vegetation management.

5. Analysis of NR's performance governance, plans and review of incidents

This chapter examines what NR is currently doing in relation to its performance governance, its performance plans and how it reviews and learns from incidents that impact on performance.

5.1. Background

117. We have assessed NR's processes against the traditional 'Plan – Do –Review' cycle to gauge whether NR has an effective performance planning process in place, teams that deliver performance on the day, and effective review processes to make sure it learns lessons. It also needs adequate resources to deliver.

118. Southeastern has raised concerns about the levels of performance; the range of incidents and NR's management of these and the potential detriment to Southeastern services as a result of focus on issues affecting other parts of the South East Route. In response, NR agreed that non-track assets and operational management had underperformed introducing a 'command room mentality' leading daily meetings to plan where resources should be allocated over the subsequent 24 hours.

119. In the second half of 2016 a new Route Managing Director (RMD) was appointed, and shortly after, a new Chief Operating Officer (COO) was also appointed.

120. This new management team revised the approach to performance improvement, and a number of initiatives were introduced. These included the Galaxy Plan, which was an articulation in a visual representation of the performance challenges for the Route, and more recently Framework 42 which provides a view on the improvement portfolio across the Route. These plans are supported by specific performance improvement plans.

121. The next step was the introduction of a joint performance improvement team from April 2017.

5.2. Performance Plans

Has NR robust plans and processes in place to deliver train performance for Southeastern?

122. The Route has provided us with a range of evidence in relation to performance plans, each plan is described further below.

The Galaxy Plan

123. As referred to above, the first change the new team implemented was the introduction of the 'Galaxy Plan'. NR describe the 'Galaxy Plan' as a 'one performance problem, one plan' approach. This plan aims to provide a single version of the truth in terms of the breakdown of the root causes of delays (i.e. track circuits, third rail, bridge strikes etc.) for both track operators and NR. NR has confirmed that the analysis behind this plan provides it with a clearer definition of the challenges faced and the areas where NR need to target improvements. It is owned by the RMD and COO. We observed this being used in various forums as a way of breaking down the challenge. From this plan NR developed a series of action plans which focused on reducing delay minutes. NR has confirmed that those action plans are now incorporated into its Framework 42 Action Plans.

Framework 42 (F42)

124. All the improvement activity across the Route has very recently been consolidated into what is known as "Framework 42" (F42). F42 is focused on driving performance improvement. NR decided to adopt an approach that would involve all levels of staff to ensure actions were focused on the right areas, owned by staff and deliverable within realistic timescales. F42 is made up of a series of high level vision statements and milestones that are due for completion, which in turn are broken down into specific Improvement Plans across the organisation. These focus on a range of issues including amongst others, reducing TSRs, reducing train delays caused by asset failures and recruitment. The plans are populated with the necessary information to enable effective management, such as actions, targets and expected benefits.

125. The tracking of actions from the above plans is managed via the Integrated Performance Action Tracker (IPAT) system, which we have also reviewed.

Southeastern & Kent Route Performance Strategy 2017-18

126. More detail on the above plans is also included in documents such as the "Southeastern & Kent Route Performance Strategy 2017-18" as well as the "South East Action Plan". This covers a range of areas, including:

- joint commentary and Annual Performance Assessment (APA);
- an overarching strategy to manage performance, including notable areas to target;
- principal causes of poor performance in the previous year;
- a high level overview of risks;
- a summary of performance benefits by plan, including a waterfall chart; overviews of the joint performance team and meeting governance; and
- key risks and opportunities and overall targets.

127. We have scrutinised these documents and discussed the detail of the plans with NR managers.

The SE Action Plan

128. NR also have a "SE Action Plan" which covers both Kent and Sussex Areas and includes a significant level of detail, including plan detail, status, owner and acknowledgement of delay minutes and DPI.

Summary of conclusions on NR's Performance Plans

129. In conclusion, there is evidence of significant planning activity. While we have been provided with evidence that demonstrates performance plans are in place, actions being tracked and managers held to account, we have made a series of observations on how this could be improved. This is a continuing activity and NR needs to ensure that sufficient rigour and discipline is used in this process to ensure the benefits of the performance plan are realised.

130. Our observations on the above plans are:

- targets relating to each Maintenance Delivery Unit (DU) are now fully developed. During our investigation we established that those for signalling centres are still in development;

- as previously noted, a new governance structure is in the process of being established to coordinate the progress of milestones. This will be monitored in regular control room meetings and has received RMD focus at periodic performance boards. This new and emerging governance structure is in the process of being fully embedded; and

- maintenance performance initiatives are well developed. Operations, performance and other planning initiatives are ongoing.

131. The evidence provided to date demonstrates that there are some clear examples of good practice, for example:

- there is evidence of an Annual Performance Assessment and some linkages between last year's outturn and this year's performance strategy targets. At a high level it does appear that the plans contain enough activity to meet target and that these activities are appropriately targeted; and

- much of the content in the "Southeastern & Kent Route Performance Strategy 2017-18" document follows established good practice, with much of what would be expected included within.

132. There are however some areas where further development is required. In relation to the evidence supplied, this includes:

- while emerging and existing risks are considered in a range of fora, these are not fully incorporated within the performance strategy. Further, while risks are quantified by impact and likelihood (on a 1-5 scale), there is no quantified impact on performance (in DMs for example);

- with some exceptions, such as the DU targets referred to above and NR's placemats which are discussed in more detail below, there are no department-level targets within the plans – i.e. performance "budget" allocated to each responsible manager for the year;

- when Incident Learning Reviews (ILRs) take place and generate learning actions (see section 5.5), it is important that recommendations from these are incorporated into the performance plans to reflect emerging risks and challenges.

There is currently no formal process for updating plans in this manner, however NR does acknowledge that this is an area it needs to develop;

- across the various performance plans, there are a range of formats, timeframes and "currencies" (DMs, PPMFs etc.) of benefits. This makes it challenging to link the documents and gain a clear picture of the activities underway and their associated benefits; and

- the new joint performance team now owns the "Southeastern & Kent Route Performance Strategy 2017-18". In order to fully embed this strategy, it is important that NR resources the necessary complement in line with its plan to ensure delivery can happen across all functions.

5.3. Train Service Management

Is NR providing effective train service management and service recovery?

Post morning peak daily conference

133. For Kent, train service management is principally managed from the Kent Integrated Control Centre (KICC) by both Southeastern and NR staff. NR's team at the KICC hold a daily post peak conference to assess delivery of the morning peak. Each area's PPM and right time statistics for the peak are reviewed and there is a standard agenda in relation to any issues which need to be escalated for support. This demonstrates that there is a clear mechanism for escalation that encourages effective service recovery by both organisations. The conference provides the opportunity to agree actions for recovery and enables parties to recognise when a 'good' peak has been delivered. Furthermore, learning can be captured quickly and the meeting brings parties together to facilitate decision making (if required) to support improved service delivery. We believe that some benefit could also be derived from NR having a similar post evening peak conference, this would allow NR to review incidents after the evening peak.

134. Encouraging quick recovery after both peaks has become even more critical in recent years in Kent – service recovery arrangements are currently hindered by reduced availability of infrastructure as a result of TLP works in the London Bridge area.

Service recovery plans

135. NR and Southeastern have line of route contingency plans in place providing an overview of service recovery plans, which are used during disruption. To support these plans and to achieve consistent use, both parties have an agreed conference structure which they can implement when disruptive events occur. Depending on the severity of the incident, KICC has three stages of conferences[30] it can put in place to manage service recovery and provide support to the incident.

Target times for service recovery

136. More recently the KICC has established target times for service recovery of significant incidents. These targets, which are dependent on the severity of incidents and the service groups affected, provide service recovery focus and highlight both good practices when incidents have been well managed by both organisations and opportunities for improvement when these targets are not met. We have seen evidence that the KICC is now using these targets to drive short term actions to support the wider route ILR/ Significant Performance Incident Review (SPIR) events. One notable area in incident review is the provision of flipcharts, where control staff can add their thoughts and input to reviews of recent large incidents. This overcomes the challenge of staff working on shifts and being unavailable to participate in reviews. This is a good example of how to capture learning quickly post-incident to facilitate continuous improvement.

Train service management and the Performance Improvement Plan

137. The KICC has a new vision of being "*a joined-up, trusted control centre, where consistency, structure and well defined processes are underpinned by enhanced facilities and* technology". This vision has driven a number of work streams and actions focused around the following four categories:

- Communication & Information flow;
- People & Process;
- Incident Management and Training; and
- Technology and Facilities upgrade.

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[30] This includes Respond, Recovery and Rebuild.

138. Having a Performance Improvement Plan in place across these areas highlights the breadth of work that NR and Southeastern are carrying out to improve service management as well as highlighting the challenge of improving processes in this area of operations. Whilst some technology projects will take time to deliver, we are encouraged by the breadth of the plan in place. Southeastern has recently acknowledged that there has been significant improvement in NR's service recovery arrangements and the substantial level of focus which KICC has been receiving recently, Southeastern describe service recovery arrangements as being strong.

Communication

139. Under the improvement programme, KICC has recently reviewed its communication processes to remove substantial duplication in relation to messaging sent to internal and external parties. It was determined that the high number of duplicated messages being sent was limiting the effectiveness of communication and not adding the level of value that sending fewer more informed messages might have. This also resulted in senior managers directly contacting the KICC for updates – diverting the attention of controllers. In light of this, NR and Southeastern have recently created a new operating model for messaging which distributes single KICC updates and addresses both NR and Southeastern requirements.

140. Communications staff are now principally tasked with sending communications which should enable leadership and technical staff to focus on the strategic management and coordination of incidents. Having the right people focused on the right tasks enables the KICC to increase its operational effectiveness and provide the support to real time train service management. This new approach to communications was recently approved by the Route's Performance Board.

141. KICC also has a weekly performance dashboard which it has created to display a number of KPIs. It details the number of incidents from the previous week and which incidents met their service recovery target. This again highlights the current focus on service recovery and allows for a link between this and Right Time and PPM targets.

142. Actions from KICC's improvement plan link in with NR's wider DPI reduction programme which has some challenging targets, including a 42% reduction in DPI by 2018-19.

143. The work undertaken to provide improved communication during incidents is encouraging. NR is in the process of applying for funding for the provision of Airwave Radios for its operational response teams. This should result in a major step change in how it tasks and communicates with its response teams on the ground and strengthen its command and control arrangements. In addition to reducing time taken to recover from incidents, better communication should improve the provision of information to staff and customers. Transport Focus research has repeatedly highlighted that a lack of information is often more frustrating for passengers than the delay itself[31]; we consider that the work KICC is doing should help in this area.

Summary of conclusions for NR's Train Service Management

144. The work undertaken to monitor recovery times is encouraging. This should help to continue to drive improvement and provide clear evidence of if the latter is happening.

145. While there are some high level service recovery plans, detailed plans remain an outstanding item.

146. Overall, we are broadly encouraged by NR's work on Train Service Management. We consider that the AM post peak conference is an effective mechanism to allow data to be assessed and areas of concern identified following the morning peak. This should encourage a focus on service recovery for both Southeastern and NR. As highlighted above, we consider that a PM post peak conference may also be useful.

147. NR has demonstrated that it has a service recovery plan which is used when disruptive events happen. We are aware that the KICC has an established target for recovery from significant events and NR has provided evidence of how targets are used to drive short term actions which then feed into the wider route ILL/SPIR events.

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[31] NRPS Autumn 2016: http://d3cez36w5wymxj.cloudfront.net/wp-content/uploads/2017/01/23205222/National-Rail-Passenger-Survey-%E2%80%93-NRPS-%E2%80%93-Autumn-2016-%E2%80%93-Main-Report.pdf

148. We are encouraged to see that the performance improvement plan incorporates train service management. We also note the improvements that NR has made in its communication of significant events to internal and external parties.

5.4. Governance structure

Is Southeastern's performance being adequately reviewed, lessons learnt and used to drive further improvements?

149. To help inform this investigation NR provided a copy of its "Framework 42 Milestones" document, which details five key meetings, in addition to daily activities, to manage performance governance processes:

- "Control Room": a six-times-a-period meeting for responsible managers to review short-term (within a week) actions;
- "Periodic Business Review (PBR)": a periodic review of performance actions, discussing milestones which are at risk of being missed. This is a meeting whereby potential tactical changes are highlighted and discussed, ahead of submission to the "Change Board";
- The Route Infrastructure Reliability Group "(RIRG)": a periodic meeting for the COO and RAM teams to jointly review their milestones to ensure alignment;
- "Performance and Maintenance Board": this periodic meeting reviews performance milestones, with Heads of Department presenting progress to the COO. This is an opportunity for issues to be flagged at a senior level and for support and strategic action to be provided as appropriate; and
- "Performance Board": a monthly meeting at which the COO presents progress on action plans and milestones to the Route Managing Director (RMD). Any changes are submitted to the "Change Board".

150. During 2016-17 and for the purposes of this investigation, we attended a number of the above sessions. For example, in May 2017 we attended the 'Level 1' visualisation where the COO held a one hour review of the previous week's performance, and in June 2017 we attended the COO's PBR, which was a deeper assessment of the current position and future plans. We also attended the Q1, Q2 and Q3 reviews, run in conjunction with the South East Route.

151. Of the sessions we attended, we observed that these were all well run and facilitated sessions, with clear leadership and direction shown from the COO in areas where there had been success as well as scope for improvement. We have been provided with the Southeastern & NR Performance Strategy 2017-18 which sets out their meeting structure on performance.

152. From the meetings we have attended and the documents received, it is evident that there is a clear governance structure in place for performance. This is a joint process between Southeastern and NR, and will need continuous management attention and support to deliver improved performance.

153. We consider NR and Southeastern should continue the focus on their meeting structure and ensure that they continue to be delivered effectively over the year.

5.5. Significant Performance Incident Reviews

Is NR reviewing and reflecting on recent large incidents to make sure that they are learning lessons and not repeating mistakes?

154. NR provided documentation on how its incident process is set up, and examples of actual SPIRs that were held. The process is referenced as both SPIRs and ILRs and were last reviewed in January 2017.

155. The process was signed off by both NR South East Route and Southeastern. Specific aspects of the process include:

- defined thresholds for incidents caused by NR South East Route, NR High Speed (HS) and Southeastern (all expressed as a number of PPM Failures);
- a two-stage process allowing for responsible managers to collate initial information, before the Performance team makes an assessment on whether a full SPIR is required;
- leaders of SPIRs are defined, as are the specific areas for coverage in the review;
- placeholder calendar invites are pre-arranged, allowing for update if a SPIR is to be run (and deletion if not). These are diarised twice during each period.

Participants for each review (dependent on the specific nature/cause of the incident) are also pre-defined;

- an action log is produced and updated to allow for the tracking of recommendations. Outputs are shared and feed into NR's wider learning processes; and

- a six-monthly review takes place to ensure processes are being adhered to and actions are being completed in a timely manner.

156. Our analysis of the available evidence shows there are a number of strengths to this process, for example: documentation and tracking of recommendations is thorough; the threshold for triggering SPIRs seems to be appropriate; and the six-monthly review of processes and actions is good.

157. There are also some areas for improvement, for example not all incidents that met the criteria had a SPIR and some actions remain outstanding several months after due dates.

158. Based on the evidence obtained during this investigation, we are broadly satisfied with the work NR is doing on ILRs, maintaining this discipline should ensure recent performance improvements are sustained.

5.6. The Performance Team

Is NR resourcing a team of skilled performance professionals who will enable NR to tackle performance in the most efficient and effective manner?

159. In light of the appointment of a new management team (with two key posts of RMD and COO being appointed in the second half of 2016) and challenges with performance, the structure of the performance team has been the subject of a wholesale review in recent months. In March 2017, a Joint Performance Team (JPT), comprising both NR and Southeastern employees, was established. The key drivers of this were to remove duplication of effort; improve working relationships; improve the level of challenge; better take advantage of Schedule 8[32] mechanisms to support

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[32] Schedule 8: the compensation train operators receive for the financial impact of unplanned rail service disruption attributable to NR or other train operators.

business cases; and to ensure "one version of the truth" when determining the current performance position. This will also provide a foundation for CP6 preparations, as performance metrics change and become more aligned. NR has provided ORR with an organogram of this new structure.

160. Southeastern recently advised that they were concerned with the slow progress by NR in populating the JPT. The new team was officially in place as of 1 April 2017 but by the end of May NR had only filled a small number of its positions, and has only just started recruiting again. Given the recent poor performance, it is concerning that NR is late in recruiting these positions.

161. In addition, from our conversations with NR and Southeastern, it was clear that the concept of the JPT was in the earlier stages of maturity.

162. JPTs have been used to good effect in a number of areas across the country and we are encouraged that the South East Route has now taken steps to introduce such a model. However further work is required over the next 12 months to make sure the JPT is able to deliver the benefits envisaged. Properly resourcing the JPT and delay attribution teams should help ensure the quality of the data improves and there is the adequate resource to support performance improvement across the Route.

5.7. Performance Reporting

Are there robust reporting processes which ensure that the right information is provided and enable the right decisions to be made?

163. The South East Route has a process map to facilitate detailed investigation of performance trends. The Route states that the placemats (i.e. a visual summary) and supporting trend graphs are intended to provide:

- a detailed periodic/Year to Date (YTD) view of the 'Galaxy' performance picture;
- an overview of performance by TOC relative to period/YTD targets;
- a breakdown of delays by TOC and attributed cause;
- an explanation for significant failures/ improvements per each TOC/cause; and

- the scale of ongoing improvement driven by action plans.

164. Placemats are used to support performance meetings, as detailed above. We have seen these placemats used at the COO PBR on 2 June and at visualisations sessions.

165. The Route also uses visualisation sessions, which we have attended, to track performance trends and results and generate actions. We have received evidence on how these meetings feed into senior management reporting.

166. As part of this investigation we have performed a detailed review of NR's performance reporting to assess whether the steps NR is taking are effective. From the evidence provided we are satisfied with NR's performance reporting. Data is being provided and regularly reviewed. NR should ensure this is migrated into the new JPT.

5.8. Delay Attribution (DA)

167. Delay Attribution (DA) has been a problem area for South East Route in the last couple of years, with the amount of delay occurring to train services being greater than the Route's ability to thoroughly and accurately allocate it to the appropriate root cause. Accurately identifying the root cause of an incident is important as it provides the Route with comprehensive and accurate management information, which in turn allows for appropriate performance improvement initiatives to be put in place to tackle causes of delay and improve train service punctuality and reliability.

168. During 2016-17, all NR delay minutes categories increased. At the end of the year, each of the five categories referred to in Chapter 3 had shown an increase (worsening) of between 11% and 39%. Of these, Non-Track Assets (NTA) and Network Management/Other (NMO) comprised the highest absolute figures. For the latter, the biggest area of delay within this was Takeback/Unexplained, which witnessed a 192% increase. As part of this investigation we wanted to understand what had driven this increase and seek assurance that NR had a plan in place to manage this issue and have confidence that the plan will be delivered effectively.

169. DA is not a new issue and we have given this issue a degree of scrutiny over the last year. When we met with NR in November 2016, the key message was that NR was facing a shortfall in DA resource across South East Route. Following the merger of Kent and Sussex Routes into the new South East Route, some streamlining was undertaken and a number of roles were amalgamated. For example, the new combined Route had one Attribution Manager (AM) and one Data Quality Specialist (DQS); whereas the previous Routes had one of each. There was also evidence of some historic under-resourcing while the new Route could not, for Employee Relations reasons, benefit from cross-cover between the Kent and Sussex Areas during peak workload periods. A number of the DA team left, with a resultant challenge to backfill the roles. When DA levels became critical, there had been occasions where the AM and DQS had been allocated to DA work – this has helped the DA workload but has caused other issues with the AM and DQS workloads further downstream. All of these issues have led to the team being overwhelmed with work – an example was quoted where on one shift the demand required 83 delay alerts per person per hour, when the realistic capacity is around 35 delay alerts per person per hour.

170. While there are options available, including the creation of "Management TINs"[33], to assist in managing peaks in demand, the level of DA demand has nevertheless been too great to be fully managed.

171. NR has shared its plan, which details how it will improve DA resource levels. This also covers medium term proposals to tackle the levels of Unexplained and Uninvestigated delays. There is however likely to be a lag between implementing these proposals and seeing an improvement in the DA position. Where new roles are introduced, there will be lead times for recruitment, training and new starters becoming fully competent in DA processes.

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[33] In the process of delay attribution, a management TIN can be created (Trust Incident Number) when the number of delay alerts is greater than the capacity of the delay alert team to process them. The intention is that these are held in the management TIN for a quieter time when the delays can be properly attributed.

172. On Kent Area, for Southeastern DA, a Sub-threshold Attribution Process (SAP) is in place. This results in sub-threshold primary delay, that occurs in consecutive TRUST sections and which causes threshold reactionary delay, remaining as Unexplained. While this allows for resource to be focused on correctly attributing threshold primary delay, it does result in an increase in Unexplained delay. This process does not follow that set out in the Delay Attribution Principles and Rules (DAPR). Also within NMO, the Route also noted that there has been an increase in Signalling Operations delays. The latter is noted as an "uncharacteristic increase" and requires further investigation. In Kent Area, DA resource was under capacity for 9.4% of the time in 2016-17; in Sussex Area this figure was 25%, highlighting that there is notably less of a concern around Kent Area DA.

173. We met with NR in March and April 2017 and reviewed its plans for JPTs for both of South East Route's principal TOCs. Early conclusions of this work are that the implementation(s) are progressing well and should help to manage some of the DA issues noted above.

174. It is clear that NR did not sufficiently recruit into these positions when there were vacancies and has reduced headcount in some areas. It is likely that under resourcing has led to an increase in Unexplained delay, for which NR is partly (financially) liable through Schedule 8 payments. In addition, to reduce the size of "Management TINs" (which have been a previous focus of ORR scrutiny), NR introduced the SAP with train operators. This reduced the number and size of Management TINs, but merely moved the problem to another area.

175. There is now recognition in NR that DA resource needs to be strengthened and good progress is being made in this area. The work on JPTs will help to achieve this aim.

5.9. Summary

176. Based on our analysis of the evidence above, we have come to the following assessment. We are broadly satisfied with the work in following areas, however there is some further work needed over the coming months to help sustain the recent improvements in performance, this includes:

- **Performance Plans**: Sufficient rigour and discipline is required in this process to make sure the benefits of the performance plans are realised;

- **Train Service Management:** An opportunity for improvement would be the development of more detailed service recovery plans;

- **Meeting structure:** NR should continue with its focus on its meeting/ governance structure and continue to deliver this effectively over the year;

- **Significant Incident Performance Reviews:** NR should maintain this discipline;

- **Performance Team:** NR should properly resource the JPT and delay attribution teams, to ensure the quality of the data improves and ensure there is adequate resource to support performance improvement across the Route;

- **Performance Reporting:** This should be migrated into the new JPT; and

- **Delay Attribution:** DA resources need to be strengthened, which NR recognises.

6 Conclusions and observations

The following chapter summarises our overall conclusions and observations based on our investigation findings.

Summary of findings, conclusions and observations

177. This investigation is focused on NR's current delivery of performance to Southeastern services and whether there is evidence of any wider systemic issues relating to performance delivery.

178. The purpose of this investigation was to establish whether NR is doing everything reasonably practicable to meet its licence obligations in relation to achieving its regulated performance outputs in relation to Southeastern services.

179. We considered that focusing on Southeastern services would allow us to look into the range of areas of concern for this service, which if not explored further could have longer term implications for its delivery, and potentially the wider South East Route, and beyond.

180. In Chapter 1 we explained that this investigation would assess a range of issues affecting performance, including:

- Asset performance;

- Impact of engineering works, in particular the Thameslink Programme (TLP); and

- NR's performance governance process.

181. This chapter provides a summary of our findings and concluding remarks on each of the points above.

182. On balance, we consider that the evidence demonstrates that NR is currently doing everything reasonably practicable in delivering train service performance to Southeastern in accordance with its obligations under Condition 1 of its Network Licence. Southeastern has achieved period performance targets since the final

period of 2016-17. The improved performance levels suggest that NR's efforts, as discussed further below, are having a positive effect. We consider that there are certain areas that NR still need to focus on to ensure Southeastern performance continues to improve, such areas are also discussed below.

Asset Performance

183. Our analysis highlights that the key elements contributing to the decline of Southeastern's train performance in 2016-17 that relate to NR are as follows:

- NR delay minutes have increased and the percentage of NR delay minutes for Southeastern is higher than any other operator;

- there was an increase in Network Management Other delay minutes which was principally driven by an increase in Unexplained delay and Commercial Takeback/Other. Delays associated with possessions have also increased;

- delay minutes attributed to Non Track Assets (NTA) (such as signals) have increased. There has been a stable decreasing trend in the number of NTA incidents which indicated that DPI is increasing; and

- for Track Assets there has been an increase in reactionary delay associated with Temporary Speed Restrictions (TSRs) that follow engineering work.

184. This analysis helped draw on the areas of focus for the remainder of this report, including:

- the assessment of the impact of engineering works (given the increase in TSRs that follow engineering work and increase in delays associated with possessions); and

- the assessment of the steps NR is taking to address issues with delay attribution (given the rise in delay minutes attributed to Unexplained delay and Commercial Takeback/Other) and the initiatives that have been introduced to reduce delay per incident.

Impact of engineering works

185. From the available evidence gathered and assessed, it would suggest that, while there has been some indirect impact such as reactionary delay as a consequence of new infrastructure, enhancement projects have not had a major negative impact on performance in 2016-17.

186. The reduction in the direct impact of TLP through possession overruns, equipment installation issues is consistent with the conversations held with industry. Some increase in reactionary delay is expected as an impact of withdrawing infrastructure, particularly in a critical artery around London Bridge will always lead to incidents being larger through higher reactionary delay. However during this investigation we have noted the positive steps that NR has taken and is taking to manage the indirect impact on performance following the delivery of enhancement projects.

187. We found that the relationship between the Route and IP has matured. In the past year, TLP has demonstrated that key lessons have been learned from earlier performance issues and it is now engaging far more closely with operators to plan access and deliver construction work. Southeastern is satisfied that TLP is working to minimise delays. There is evidence of robust access planning, with the works on schedule, the programme adhering to its initial access strategy and remaining within the Schedule 8 budget. NR has demonstrated it is applying close-scrutiny to its contractors to ensure they are successfully delivering work on site and handing back infrastructure in a timely and high-quality manner.

188. Delivery of TLP will continue to present a risk to train performance on Southeastern's network across the remainder of CP5; further possessions are planned throughout 2017 and 2018, including at London Bridge station. The programme's track record in delivering against its Construction Staging Strategy, the close-co-operation it has with operators, the client and route-based stakeholders and the recent improvements in reducing post-implementation failures and possession overruns indicates TLP is well placed to manage these challenges.

189. While the improvements are positive, we consider that NR should continue to:

- build on recent improvements and lessons learned, for example the 2016 points failure at London Bridge, ensuring all parties are aware of the configuration and inspection requirements of new asset types; and

- continue to work closely with stakeholders to manage access and deliver the required volumes while avoiding unnecessary overruns.

190. In recent years NR has devolved day to day running of the railway business to eight geographical routes, we consider best practice must be shared amongst the routes. As NR is responsible for delivering a high-profile portfolio of major enhancements in CP5 it is critical that lessons learned from TLP are shared within the broader organisation, particularly in relation to the co-operation between operator, IP and the Route in planning and delivering access and the asset management of new infrastructure in the months post implementation. In addition, the best-practice evident in the 2016-17 possession management and the avoidance of delays caused by engineering overruns will be of interest to major schemes elsewhere in the UK, particularly where access is at a premium and there is already pressure on train performance. It is important that NR does not allow devolution of responsibilities to its routes to prevent effective cross-organisational learning from taking place or to encourage the development of silos which run the risk of repeating mistakes made elsewhere on the network.

191. In relation to our assessment of NR's approach to asset management (i.e. its maintenance and renewal of assets), we concluded that NR is approaching the challenges in a positive manner and is serious about improving the situation, reducing incidents and the associated delays. NR currently uses a range of remote condition monitoring (RCM) to identify and predict the condition of some of its assets. While NR is encouraged to continue to make use of its RCM, we consider that going forward it should explore ways to be smarter in predicting all asset failures. We also considered that the sharing of best practice from other Routes could be improved and that there are steps that NR could adopt to drive further improvements in its vegetation management.

NR's performance governance process

192. We have assessed a number of areas for improving performance, including the discipline of performance planning; NR's delivery and review of Train Service Management; and whether NR is adequately resourced.

193. In its performance planning, we noted that NR had recently developed an over-arching strategic change programme entitled Framework 42, which looks at areas across the business. An underlying principle is a focus on the 'basics'. We also found that NR's plans for 2017-18 were set out in detailed documents. We were provided with evidence showing that there is a structure in place to hold managers to account to their outputs. This includes visualisation on a weekly and periodic basis.

194. For Train Service Management we found that there was a joint NR / TOC focus to make the Kent integrated Control Centre a more effective deliverer of train services. NR and Southeastern have demonstrated how they undertake quick reviews and more in-depth significant performance reviews.

195. In terms of resourcing, we found that there are several NR vacancies in the JPT.

196. We also established that the growth in the Unexplained and Un-Investigated category is largely driven by the volume of incidents exceeding the capacity of the attribution team.

197. We consider these new governance structures and focus on performance planning is positive and should bring improvements, if resourced as planned and sustained. We consider that NR should continue to focus on the following:

- ensuring sufficient rigour and discipline is used in its planning to ensure benefits of the performance plan are realised;

- focusing on its improvement plans, embedding the Framework 42 plan and delivering this throughout the year;

- developing more detailed service recovery plans; and

- fully enacting its resource plan for the JPT and delay attribution teams.

Annex A - Glossary

APA	Annual Performance Assessment
BAU	Business as Usual
CaSL	Cancellations and Significant Lateness
COO	Chief Operating Officer
COT	Condition of Track, usually associated with a temporary speed restriction.
CP4	Control Period 4 (1 April 2009 – 31 March 2014)
CP5	Control Period 5 (1 April 2014 – 31 March 2019)
CRI	Composite Reliability Index
CRR	Customer Reasonable Requirements
DfT	Department for Transport
DM	Delay Minute
DNO	Distribution Network Operator
DU	Delivery Unit
E&W	England and Wales
DPI	Delay per incident
Derailment	When a train's wheelset runs off or leaves the track.
DRAM	Director Route Asset Management
F42	Framework 42
GB	Great Britain
GSM-R	The Global System for Mobile Communications - Railway
GTR	Govia Thameslink Railway

HS	High Speed
ILR	Incident Learning Review
IP	Investment Projects
iPAT	Integrated Performance Action Tracker
JPT	Joint Performance Team
KICC	Kent Integrated Control Centre
KPI	Key Performance Indicator
LNE	London North Eastern
LSE	London and South East (sector)
LSIP	Line Speed Improvement Programme
MAA	Moving Annual Average
MAT	Moving Annual Total
MTBSAF	Mean Time Between Service Affecting Failure
NMO	Network Management/Other. This is a KPI category.
NTA	Non-Track Assets. This is a KPI category.
NR	Network Rail
NTA	Non-Track Assets
NRPS	National Rail Passenger Survey
ORR	Office of Rail and Road
OTMR	On Train Monitoring Recording
PIDD	Passenger Information During Disruption
PPM	Public Performance Measure
PR13	Periodic Review 2013
PR18	Periodic Review 2018

PTG	Poor Track Geometry
RAM	Route Asset Manager
Reactionary delay	Delays caused to other train services following an incident they were not directly involved in.
Regulatory target	A regulatory target is a target set for Network Rail by ORR at the conclusion of a periodic review. It defines a level of performance, attainment, or progress that Network Rail is funded to achieve at a point in time. ORR sets Network Rail a range of regulatory targets for each year of a control period, including train service performance, PPM and CaSL.
RMD	Route Managing Director
RRIG	The Route Reliability Infrastructure Group
SNRP	Statement of National Regulatory Provisions
SPIR	Significant Performance Incident Review
SWAS	Severe Weather, Autumn & Structures. This is a KPI category.
TA	Track Assets. This is a KPI category.
TF	Transport Focus
TLP	Thameslink Programme
TOC	Train Operating Company
TSR	Temporary Speed Restriction

Annex B – Network Rail's regulated performance outputs

Public Performance Measure (PPM) and CaSL (Cancellations and Significant Lateness) are whole-industry measures which we assess NR's performance against.

Public Performance Measure

PPM is the proportion of trains that arrive at their final destination on time. On time is defined as arriving at the destination within five minutes of the planned timetable for London and South East, Regional and Scotland operators, or within ten minutes for the Long Distance operators.

The moving annual average (MAA) reflects the proportion of trains on time in the past 13 periods. In P13, the MAA also represents the PPM for the financial year. A higher score indicates higher performance.

Cancellations and significant lateness

CaSL captures the percentage of trains that have caused significant disruption to at least some passengers.

The moving annual average (MAA) reflects the proportion of trains cancelled or significantly late in the past 13 periods. In P13, the MAA also represents the PPM for the financial year. A lower score indicates higher performance.

A train is considered to be significantly late if it calls at all booked stations, completes its entire booked journey and arrives between 30 and 119 minutes after the scheduled arrival time at the final destination.

A train is considered to be a part cancellation if it covers more than half the scheduled mileage and either failed to run the whole journey or failed to stop at any station on the way. Trains completing their scheduled journey but arriving at their final destination late by 120 minutes or more also count as part cancellations.

A train is considered to be a full cancellation if it covers less than half the scheduled mileage, or does not run at all.

A train that fails CaSL also fails PPM.

Network Rail's regulated performance outputs

We look at issues affecting overall performance delivery including the scale of external factors (such as severe weather) and TOC and NR caused delays. Our focus is on whether NR did everything reasonably practicable to achieve its regulatory performance targets.

In Scotland, NR's regulated output is an annual PPM target of 92% for years 1-4 for CP5 and a CP5 exit target of 92.5%. There is no CaSL target.

In England and Wales NR's regulated outputs are

- PPM: A target of 92.3% for franchise TOCs for 2016-17 and no TOC to exit CP5 below 90%.

- CaSL: A target of 2.2% for franchised TOCs apart from Virgin Trains East Coast (VTEC), Virgin Trains West Coast (VTWC) and GreatWestern where slightly different rules apply:

- Virgin Trains East Coast (VTEC) must not exit Control Period 5 (CP5)[34] with PPM below 88% or CaSL above 4.2%

- Virgins Trains West Coast (VTWC) must not exit CP5 with PPM below 88% or CaSL above 2.9%

- Great Western high speed services must not exit CP5 with PPM below 88% or CaSL above 2.2%

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[34] Control period 5 (1 April 2014 to 31 March 2019).

Annex C - Enforcing Network Rail delivery of operational performance

Overview

The railway network needs to be run for the benefit of the whole country. ORR regulates Network Rail, holding it to account for delivering high levels of performance and service, as well as value for money – for passengers, the freight industry and taxpayers.

ORR's approach to enforcement is set out in our Enforcement Policy and Penalties Statement[35]. In general, our policy is to monitor rigorously delivery of performance requirements and take effective enforcement action where this is in the public interest. ORR's focus is on using our regulatory powers to resolve serious or systemic issues that are not dealt with in contractual relationships. ORR's monitoring will generally focus on such issues.

We will monitor and hold Network Rail to account against its network licence. Under condition 1 of the licence[36], Network Rail is required to achieve the purpose of the condition to the greatest extent reasonably practicable having regard to all relevant circumstances (including the ability of Network Rail to finance its licensed activities).

The purpose of condition 1 is to secure the:

   a) operation and maintenance of the network;

   b) renewal and replacement of the network; and

   c) improvement, enhancement and development of the network,

in each case in accordance with best practice and in a timely, efficient and economical manner so as to satisfy the reasonable requirements of persons providing services relating to railways and funders, including potential providers or potential funders in respect of:

   i.   the quality and capability of the network; and

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[35] ORRs Enforcement Policy and Penalties Statement:
  http://www.orr.gov.uk/__data/assets/pdf_file/0018/4716/economic-enforcement-statement.pdf.

[36] Network Rail Infrastructure Ltd Licence:
  http://www.orr.gov.uk/__data/assets/pdf_file/0012/3063/netwrk_licence.pdf

ii.   the facilitation of railway service performance in respect of services for the carriage of passengers and goods by railway operating on the network.

CP5 requirements

In the PR13 final determination[37], we set performance outputs for each of the five years 2014 - 2019. These include minimum PPM and maximum CaSL requirements by franchised operator, these are summarised below.

	Output
Train Service Reliability	• Public Performance Measure (PPM)[38] for England & Wales (annual and CP5 exit of 92.5%), Scotland (annual 92% and CP5 exit of 92.5%) and franchised Train Operating Companies (TOC) in England & Wales (rolling annual output Joint Performance Improvement Plans (JPIP)[39], no TOC to exit CP5 below 90%, except East Coast and Virgin who must not exit CP5 with PPM below 88% or Cancellations and Significant Lateness (CaSL)[40] above 4.2% and 2.9% respectively, and 88% for First Great Western High speed services at the end of CP5). • CaSL for England & Wales (annual and CP5 exit of 2.2%) and rolling annual output JPIP. • Freight Delivery Metric[41] (National annual 92.5%)

NR and TOCs have the flexibility to work together to set the 'trajectory' to reach the 2019 outputs, using the industry led Performance Strategies.

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[37] PR13 final determination: http://www.orr.gov.uk/__data/assets/pdf_file/0011/452/pr13-final-determination.pdf

[38] PPM is the proportion of trains that arrive at their final destination on time. A train is defined as on time if it arrives within five minutes of the planned destination arrival time for London & South East and regional services; or ten minutes for long distance services.

[39] JPIPs are joint performance improvement plans. As an outcome from Network Rail's Performance Planning Reform Programme, they are likely to be renamed but the targets and initiatives committed to in these plans will have the same status as JPIPs.

[40] CaSL represents the proportion of trains which arrive at final destination greater than 30 minutes from planned arrival, or full/part cancelled or missed calls. Scotland does not have a CaSL target as the Scottish Government's HLOS did not specify one.

[41] Freight Delivery Metric (FDM) measures the percentage of freight trains arriving at their destination within 15 minutes of scheduled time. It only covers delay caused by Network Rail.

PPM and CaSL Moving Annual Average (MAAs) for each franchised operator, as described in Performance Strategies, continue to be monitored and enforced as Customer Reasonable Requirements (CRRs).

We may intervene in certain circumstances, for example if an operator's PPM (MAA) appears likely to fall more than two percentage points below its agreed PPM output or CaSL MAA appears likely to increase more than 0.2 percentage points above target.

Monitoring

Approach to monitoring Network Rail's performance in years one and two of CP5

Network Rail entered year one of CP5 (2014-15) at much lower levels of performance than anticipated in our PR13 Final Determination. The company forecast that it would miss a number of regulated performance outputs during the first two years of CP5.

Network Rail developed the CP5 Performance Plan, which brought together a number of initiatives to improve train performance in the first two years of the control period.

We concluded that in years one and two, delivery of the plan would indicate that Network Rail was doing everything reasonably practicable to comply with its licence obligations.

Approach to monitoring performance in years three to five of CP5

Network Rail has now devolved responsibility for the day-to-day running of its infrastructure from its centre to ten 'strategic' devolved routes, each with their own management team. This model involves a rebalancing of operational responsibility from the centre, with greater devolved accountability for the routes and the creation of a Route Services Directorate to act as a provider of services to the routes for which economies of scale or scope might be retained through centralised delivery, or for which a degree of network-wide coordination is needed.

For 2016-17 each Route Managing Director has a scorecard that has been agreed with their customers, the train operators, and which will be used to judge their end of year performance. They include a number of categories, one of which relates to train service performance.

We now use the route scorecards as further evidence when assessing whether Network Rail is doing all it should to meet the regulated performance targets. Ultimately Network Rail is still held to account for delivery of the regulated targets but the scorecards provide evidence as to whether it has done all that is reasonably practicable to meet its regulated targets.

A move to route based monitoring also supports recent recommendations in the Shaw Report[42] which suggested Network Rail should move to greater devolution to its routes.

Intervention

We do not expect that failure by Network Rail leading to it missing a target would generally, on its own, constitute a licence breach.

We expect parties to try to resolve any problems themselves in the first instance.

In deciding what action to take, we will look at all the circumstances of the case including past, current and likely future performance, what action Network Rail is or has taken to try to resolve poor performance, whether Network Rail's plans to improve performance are adequate and appropriate and any mitigating or aggravating factors, as well as looking at whether the TOC has acted reasonably.

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[42] The Shaw Report Match 2016:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/510179/shaw-report-the-future-shape-and-financing-of-network-rail.pdf.

Annex D - Relevant Railways Act 1993 legislation

The Office of Rail Regulation (ORR) must discharge the statutory duties placed upon it by section 4 of the Railways Act 1993 (as amended by the Transport Act 2000 and the Railways Act 2005).

Section 4 of the Railways Act 1993

(1) The Office of Rail Regulation shall have a duty to exercise the functions assigned or transferred to it under or by virtue of this Part or the Railways Act 2005 that are not safety functions in the manner which it considers best calculated —

(zb)   to promote improvements in railway service performance;

(a)   otherwise to protect the interests of users of railway services;

(b)   to promote the use of the railway network in Great Britain for the carriage of passengers and goods, and the development of that railway network, to the greatest extent that [it] considers economically practicable;

(ba)   to contribute to the development of an integrated system of transport of passengers and goods;

(bb)   to contribute to the achievement of sustainable development;

(c)   to promote efficiency and economy on the part of persons providing railway services;

(d)   to promote competition in the provision of railway services for the benefit of users of railway services;

(e)   to promote measures designed to facilitate the making by passengers of journeys which involve use of the services of more than one passenger service operator;

(f)   to impose on the operators of railway services the minimum restrictions which are consistent with the performance of its functions under this Part or the Railways Act 2005;

(g)   to enable persons providing railway services to plan the future of their businesses with a reasonable degree of assurance.

(2)   Without prejudice to the generality of subsection (1)(a) above, the Office of Rail Regulation shall have a duty, in particular, to exercise the functions assigned or transferred to it under or by virtue of this

Part or the Railways Act 2005 that are not safety functions in the manner which it considers is best calculated to protect—

(3)   the interests of users and potential users of services for the carriage of passengers by railway provided by a private sector operator otherwise than under a franchise agreement, in respect of—

(a)   the prices charged for travel by means of those services, and

(b)   the quality of the service provided, and

(4)   the interests of persons providing services for the carriage of passengers or goods by railway in their use of any railway facilities which are for the time being vested in a private sector operator, in respect of—

(a)   the prices charged for such use; and

(b)   the quality of the service provided.

The Office of Rail Regulation shall be under a duty in exercising the functions assigned or transferred to it under or by virtue of this Part or the Railways Act 2005 that are not safety functions—

23   to take into account the need to protect all persons from dangers arising from the operation of railways; and

24   to have regard to the effect on the environment of activities connected with the provision of railway services.

Sections 3A, 3B and 4 relate to the Secretary of State and the Scottish Minister

The Office of Rail Regulation shall also be under a duty in exercising the functions assigned or transferred to it under this Part or the Railways Act 2005 that are not safety functions—

(a)   to have regard to any general guidance given to it by the Secretary of State about railway services or other matters relating to railways;

(aa) to have regard to any general guidance given to it by the Scottish Ministers about railway services wholly or partly in Scotland or about other matters in or as regards Scotland that relate to railways;

(ab) in having regard to any guidance falling within paragraph (aa), to give what appears to it to be appropriate weight to the extent (if any) to which the guidance relates to matters in respect of which expenditure is to be or has been incurred by the Scottish Ministers;

(b) to act in a manner which it considers will not render it unduly difficult for persons who are holders of network licences to finance any activities or proposed activities of theirs in relation to which the Office of Rail Regulation has functions under or by virtue of this Part or that Act

(whether or not the activities in question are, or are to be, carried on by those persons in their capacity as holders of such licences);

(5) to have regard to the funds available to the Secretary of State for the purposes of his functions in relation to railways and railways services;

(ca) to have regard to any notified strategies and policies of the National Assembly for Wales, so far as they relate to Welsh services or to any other matter in or as regards Wales that concerns railways or railway services;

(cb) to have regard to the ability of the National Assembly for Wales to carry out the functions conferred or imposed on it by or under any enactment.

(6) to have regard to the ability of the Mayor of London, [25]and Transport for London to carry out the functions conferred or imposed on them by or under any enactment.

(5A) Before giving any guidance for the purposes of subsection (5)(a) above the Secretary of State must consult the National Assembly for Wales.

(5B) In exercising its safety functions, other than its functions as an enforcing authority for the purposes of the Health and Safety at Work etc Act 1974, the Office of Rail Regulation shall be under a duty to have regard to any general guidance given to it the Secretary of State.

25   In performing its duty under subsection (1)(a) above so far as relating to services for the carriage of passengers by railway or to station services, the Office of Rail Regulation shall have regard, in particular, to the interests of persons who are disabled.

26   Without prejudice to the generality of paragraph (e) of subsection (1) above, any arrangements for the issue and use of through tickets shall be regarded as a measure falling within that paragraph.

(7ZA) Where any general guidance is given to the Office of Rail Regulation for the purposes of subsection (5)(a) or (aa) or (5B)—

- it may be varied or revoked by the person giving it at any time; and

- the guidance, and any variation or revocation of the guidance, must be published by that person in such manner as he considers appropriate.

(7A)   Subsections (1) to (6) above do not apply in relation to anything done by the Office of Rail Regulation in the exercise of functions assigned to it by section 67(3) below ("Competition Act functions").

(7B) The Office of Rail Regulation may nevertheless, when exercising any Competition Act function, have regard to any matter in respect of which a duty is imposed by any of subsections (1) to (6) above, if it is a matter to which the Office of Fair Trading could have regard when exercising that function.

. . .

(8)   In this section—

"the environment" means all, or any, of the following media, namely, the air, water and land (and the medium of air includes the air within buildings and the air within other natural or man-made structures above or below ground);

"notified strategies and policies", in relation to the National Assembly for Wales, means the strategies and policies of that Assembly that have been notified by that Assembly for the purpose of this section to the Office of Rail Regulation;

"the passenger transport market" means the market for the supply of services for the carriage of passengers, whether by railway or any other means of transport;

"railway service performance" includes, in particular, performance in securing each of the following in relation to railway services –

 a.   reliability (including punctuality);

 b.   the avoidance or mitigation of passenger overcrowding; and

 c.   that journey times are as short as possible;

"safety functions" means functions assigned or transferred to the Office of Rail Regulation:

 i.   under this Part;

 ii.   under or by virtue of the Railways Act 2005; or

 iii. under or by virtue of the Health and Safety at Work etc Act 1974;

Annex E– Investigation Terms of Reference

Background

Enforcing Train Operating Companies' (TOC) operational performance

Network Rail (NR) and Train Operating Companies' (TOCs) have the flexibility to work together to set the 'trajectory' to reach the 2019 outputs, using the industry led Performance Strategies process. We will intervene in certain circumstances, for example if an operator's PPM (MAA) appears likely to fall more than 2.0 percentage points below its agreed output or CaSL MAA appears likely to increase more than 0.2 percentage points above target.

NR will need to explain each year how delivery of the individual Performance Strategies relates to delivery of the required national performance. We expect robust governance arrangements to be in place so that whenever the Performance Strategies taken together do not give us confidence the national requirements will be met, NR develops clear and convincing plans to bridge any gap, which it must then deliver.

There are established industry processes through which NR, TOCs and FOCs work together to deliver good train performance. While we can hold NR to account, funders can hold their operators to account. We work with the funders to ensure these performance management processes work well and we have a shared understanding of industry performance risks. We may intervene if called on by third parties such as an operator, a funder, Transport Focus or London TravelWatch. However we will not wait for a complaint if our own monitoring suggests action is needed to address performance issues.

In summary, we will intervene when:

(a) NR and a TOC cannot agree a Performance Strategy target; or

(b) NR's plans or actions to deliver at least 88% PPM for Virgin East Coast Trains and Virgin Trains West Coast (and First Great Western's high speed services), 92.5% PPM for Scotland and at least 90% PPM for every other franchised TOC in the last year of CP5 are inadequate; or

(c) NR's plans or actions to deliver the national performance outputs are inadequate (including where NR needs to bridge a gap between the sum of the Performance Strategy targets and the national outputs); or

(d) Performance for an individual TOC is, or is likely to fall more than 2 percentage points below its agreed end of year PPM (MAA) output or 0.2 percentage points above its agreed end of year CaSL (MAA) output.

(e) A concerned TOC requests that we do so where NR is unable to realise the deliverables that underpin the performance trajectory, or the outputs committed to in the Performance Strategy.

Where we intervene, we will follow a staged approach of review, investigation and escalation which may ultimately lead to formal enforcement action. We may require new or updated recovery plans, the formation of a recovery board, or some other form of assurance from NR.

In deciding whether and how to intervene we will focus on systemic and/or serious issues. We will work with the established industry processes, (for example National Task Force (NTF)), where possible, taking account of how the commitments made dealt with the greater uncertainty associated with forecasts at the TOC level.

Purpose of this investigation

To establish whether NR is doing everything reasonably practicable to meet its licence obligations in relation to achieving its regulated performance outputs in relation to Southeastern services. This includes ensuring that NR is doing everything reasonably practicable to achieve its annual performance strategy targets and CP5 national regulatory targets – including assessing whether there are any systemic weaknesses relating to NR's operational planning, management and delivery of performance.

Scope of the investigation

Based on initial analysis of the evidence ascertained so far, the ORR is particularly interested in the following areas (although the investigation may be wider depending on the evidence that emerges).

a) NR's performance governance process, from the analysis it undertakes, the plans created, the effective delivery of these plans and how NR learns from the performance incidents that occur;

b) The impact of NR's Infrastructure Projects (IP), in particular the Thameslink programme. This is partly about the reduction in operational flexibility resulting from the programme (and was this properly forecast), as well the interface between the programme team and the Route (particularly for the handover of asset);

c) Temporary Speed Restrictions (TSRs) on Kent, given the level of impact of them, and the high number relative to Sussex.

Methodology

The ORR will use the evidence gathered from its current monitoring, NR and industry to assess:

- Whether there are any mitigating factors which are affecting performance in these specific operators, for example factors such as weather and passenger growth.

- Whether areas of asset failings; including the incident at Lewisham and August failings was a one-off or a symptom of a wider problem
- The steps, NR has taken or is taking to address performance issues and make improvements

To conduct our investigation we will consider the following sources:

- The progress reports we received throughout the year
- Network Rail's 2016-17 Scorecard
- Any further evidence that NR ask us to consider including further plans
- Views and further information from relevant operators
- End of year performance data

How the investigation will be conducted

In carrying out its investigation ORR expects to draw upon information and reviews already carried out internally as part of its usual regulatory roles. The review will engage primarily with NR, as well as affected operators and funders.

Annex F - List of meetings held as part of investigation

Organisation	Date	Subject
Network Rail	09/05/2017	Southeastern Investigation
Department for Transport	18/05/2017	Southeastern Investigation
Network Rail	19/05/2017	Southeastern Investigation
London Travel Watch	19/05/2017	Stakeholder Engagement
Network Rail	24/05/2017	Shared Documentation Meeting
Transport Focus	25/05/2017	Stakeholder Engagement
Network Rail	26/05/2017	TSR Review Meeting
Network Rail	30/05/2017	Level 1 Visual Management
Southeastern	30/05/2017	NR's delivery to Southeastern
Network Rail	31/05/2017	'Go-Look-See' Asset/Operational/Discussion
Network Rail	02/06/2017	'Go-Look-See' COO PBR
Network Rail	02/06/2017	'Go-Look-See' KICC

Annex G - Key supporting documents - reports, reviews and information considered as part of this investigation

2017-18 Performance Plan – NR

Earthwork (Shrinkage) Improvement Plan – NR

E-mail correspondence with NR

Incident Learning Reviews – NR

Initial Investigation Report due to Possession Overrun - NR

iPAT – NR

Kent SPIR Milestones – NR

Kent TSR Impacts – NR

KICC improvement plan – NR

Lewisham Structural Failure Remit – NR

Meeting minutes from DfT

Meeting minutes from NR

Meeting minutes from meeting with Southeastern

Meeting minutes from Transport Focus

NRHS Board period updates – NR

OA/SCA Executive Meeting summary and actions – NR

ORR 'Go-look-see' sessions– NR

Route Delivery Review documents – NR

Route Planning Improvement Project – NR

Southeastern's response to ORR questionnaire