ORR

OFFICE OF RAIL AND ROAD

Office of Rail and Road Investigation

Review of Network Rail's performance delivery to South Western Railway services

July 2018

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Executive Summary

Passengers rely on both Network Rail and train operators for punctual and reliable train services. The Office of Rail and Road's (ORR) remit is to ensure that Network Rail is doing all that is reasonably practical to deliver its contribution to train service performance.

In February 2018 ORR reviewed Network Rail's likely out-turn against the range of 2017-18 targets across England & Wales. Out of all of Network Rail's routes that were likely to miss their targets we decided to investigate Wessex - for its delivery to services run by South Western Railway (SWR) - as performance had been declining since March 2016 and the route caused a higher than average proportion of delay (68% compared to a national average of 60%).

At that time we had also just begun our examination of Network Rail's strategic business plan, as part of the periodic review 2018. Wessex's component (route strategic plan) proposed a performance trajectory for the end of CP6 five percentage points lower than SWR's franchise commitments. This was the largest mismatch in any of the route strategic plans and provided a further reason to examine the route in greater detail.

The purpose of our review was to establish whether Wessex has a sustained commitment to drive performance improvements and it has put in place adequate plans. In particular, we examined whether the route:

- has identified the main issues affecting its delivery of performance;
- has appropriate plans in place to deliver improvements in the short term; and
- can sustain these plans in the medium to long term.

Our review was informed by data on the causes of disruption (collected through an industry attribution process), meetings with both the route and SWR and further evidence supplied to us by the route.

Has Wessex identified the main issues affecting performance?

To inform our conclusions we analysed performance data to identify the areas that were causing the greatest level of delay. Once we had isolated specific events, such as the impacts of the Waterloo Station upgrade, we found an underlying trend of increasing delay

per incident (DPI) associated with infrastructure failures, meaning that the number of asset failures was stable but the delay caused by these failures had risen.

Wessex explained the factors that, taken together, had constrained its ability to respond to operational incidents. These included factors within its control such as moving control functions to Basingstoke in April 2017 and infrastructure changes resulting from the longer trains programme[1]. We concluded that this was a credible explanation for the increase in DPI.

Has Wessex put in place sufficient plans to deliver improvements in the short term?

We examined the following areas:

- **Asset management:** whether the route has plans to address asset reliability as effectively as possible?
- **Control arrangements:** whether it has put in place sufficient arrangements to respond to incidents effectively?
- **Performance planning:** whether it has a sufficient improvement plan in place?

Of the three, we were most assured about Wessex's plans for managing its assets. Its asset plans were well defined and the route has a proven track record of delivering a number of asset reliability initiatives in CP5. In addition, out of all of Network Rail routes, it has improved its asset reliability (as measured by the composite reliability index) the most in CP5[2].

For control, we found that current contingency plans have not been updated since 2011, the consequences of which could lead to sub-optimal decisions when responding to incidents. For example, Raynes Park has been used to terminate trains, despite narrow platforms making it susceptible to overcrowding. While this may be the optimal operational decision it should be reviewed in the context of current operations. The route has put in place steps to update its plans and has committed in its 2018-19 Performance

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[1] This programme has improved capacity on the route through increasing the standard length of trains on suburban lines from 8 to 10 cars.

[2] The CRI provides an indication of the contribution of asset reliability to the safety and performance of the railway.

Improvement Plan (PIP) that contingency plans '*require enhancement or rewrite to ensure they are fit for purpose'*.

We also found that the route has recognised that its compliance with Standard Operating Practices (SOPs) - which should be adopted following an incident - needs to improve. Wessex described one example where, following a track circuit failure at Vauxhall, an Asset Response Manager was not appointed which hindered its ability to respond to the incident. The route has committed to improving compliance in 2018-19.

In terms of performance planning, Wessex has a PIP covering a range of activity but we found that it has not yet been sufficiently developed. For example, some of the actions in the plan were unspecific, recorded as '*Delivery'* or '*Track Benefits'*.

We also found that Incident Learning Reviews (ILRs)[3] were only held for a small number of incidents, rather than all large incidents. 22 ILRs were held in 2017-18 however there were about 90 incidents that caused over 1,000 minutes of delay. The route also reported that some ILRs were held several weeks after an incident had occurred. When actions were generated, there was no assurance of delivery. Of the six ILRs we reviewed, the actions contained a large number that were unspecific or recorded as '*to be confirmed'* for completion. We also found that the lessons from each review were not systematically fed back into broader business planning such as the PIP or route strategic plan for CP6. During our review, the route agreed that the existing process was not effective enough and has confirmed that it has begun to implement improvements.

Can the route sustain its plans in the medium to long term?

Given the asset management challenges identified and comparing these to the activities set out in Wessex's route strategic plan for CP6, we found a clear alignment. The plans included '*Increase in Asset Reliability associated with the Reliability Growth Plan'*, reducing speed restrictions and improving track circuit reliability between Waterloo and Clapham.

The route has also put in place other longer-term initiatives that are outside the PIP, for example the Faster, Safer Isolations project which is part of Network Rail's wider Electrical Safety Delivery programme. This programme aims to reduce safety risks to track workers,

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[3] This is a process employed by NR to review significant performance impacting incidents. It is triggered by incidents of 1000 minute delay or more. It can, however, be used for any size incident where it is agreed there are lessons to learn or actions to capture.

reduce the costs and impacts associated with achieving electrical isolation and improve the productivity of maintenance and renewal activities on electrified sections of the network. Ultimately, this initiative will increase the amount of time available for engineering work.

For CP6, Wessex has planned to target its renewals on the most vulnerable and critical assets and has maintenance volumes assigned to mitigating risk over the portfolio. It has planned to enhance its 'predict and prevent' capability, in line with asset policies, to better target its planned proactive maintenance. This should increase the reliability of the network and reduce infrastructure failures.

With regard to the route's wider performance plans and more specifically for operational control, we have not been able to conclude whether the plans are sustainable, as they have not been fully developed.

Next steps

Running parallel to our review is the review of SWR and Network Rail performance by Sir Michael Holden. This is due to conclude in summer 2018.

Our report includes a series of recommendations to the route based on the findings and we expect it to address these. The route is also in the process of embedding many of its plans, it has committed to these being finalised by August 2018. Therefore, we think it is prudent to revisit our recommendations and whether any further formal investigation in needed, once the review by Sir Michael Holden has concluded and route's plans are finalised.

1. Introduction

1. The framework for how ORR monitors and enforces Network Rail's delivery of train service performance is set out in a [separate annex](#). The relevant part of this framework can be summarised in the following steps:

    - at the start of the year, each of Network Rail's routes agree annual targets[4] with each of the train operators through joint Performance Strategies;
    - ORR monitors Network Rail's delivery against performance targets throughout the year, escalating concerns for resolution on an ongoing basis; and
    - at the end of the performance year (31 March) 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 conducting our review, we considered the following evidence:

    - passenger satisfaction results;
    - periodic and end of year performance data (up to 31 March 2018);
    - evidence supplied by Network Rail; and
    - views from the train operator (SWR).

3. Wessex has engaged positively and collaboratively in providing evidence and facilitating our review. Annex B sets out the meetings held and Annex C provides a list of all key supporting documents.

4. The remainder of this document is structured as follows:

    - Chapter 2 sets out an overview of the impact on passengers resulting from the route's performance;
    - Chapter 3 sets out an overview of the characteristics of the route and describes specific circumstances that Wessex faced;

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[4] Public Performance Measure (PPM) and Cancellations and Significant Lateness (CaSL).

- Chapter 4 summarises our analysis of the data available;
- Chapter 5 reports our findings and conclusions on asset management;
- Chapter 6 reports our findings and conclusions on operational control; and
- Chapter 7 reports our findings and conclusions on performance planning.

2. Passenger impact and passenger satisfaction on SWR services

This chapter provides context – setting out the impact on passengers and levels of dissatisfaction with SWR services.

2.1. Passenger impact

5. In the year ending December 2017, 216m passenger journeys[5] were made on SWR services. This represents 12.5% of all passenger journeys made in Great Britain (GB).

6. The number of passenger journeys made on SWR services decreased by 7% compared to 2016-17. In comparison, the total number of passenger journeys made in GB decreased by 1% over the same time period.

7. We have estimated that approximately 34m passenger journeys were 'late', in that their SWR train did not reach its destination within five minutes of the advertised time. To illustrate the scale of delay, we have drawn out the effect that missing performance targets has had on passengers.

8. Over 2017-18 SWR achieved a PPM MAA of 84.3%, compared to its target of 89.3%. Of the 34m journeys that were late, approximately 10.8m resulted from SWR services not achieving its PPM target of 89.3% (i.e. if Wessex and SWR had achieved their PPM target of 89.3% there would have been 10.8m fewer delayed passenger journeys).

9. Approximately 9.6m of SWR passenger journeys were affected by cancelled or significantly late trains at their final scheduled destination. Significantly late is defined as 30 or more minutes late. Of the 9.6m journeys cancelled or significantly late, 2.0m were a result of SWR services not meeting its CaSL target of 3.5% (i.e. if SWR had achieved its CaSL target of 3.5% there would have been 2.0m fewer passenger journeys cancelled or significantly late).

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[5] Source: ORR Passenger Rail Usage 2016-17 Q4 Statistical Release.

2.2. Passenger satisfaction

10. The National Rail Passenger Survey (NRPS) conducted by Transport Focus provides a network-wide picture of customers' satisfaction with their train journey[6]. The results for spring 2018 were published on 19 June 2018, reflecting fieldwork carried out between 15 January and 28 March 2018. While survey results are principally arranged on a train operator basis they are as relevant to Network Rail as they are to train operators.

11. In spring 2018, overall passenger satisfaction for SWR was 80%. This is compared to 81% nationally. Overall satisfaction by TOC varied between 69% and 95%.

12. 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 – SWR PPM (periodic) compared to Passenger Satisfaction[7], 2013-14 to 2017-18
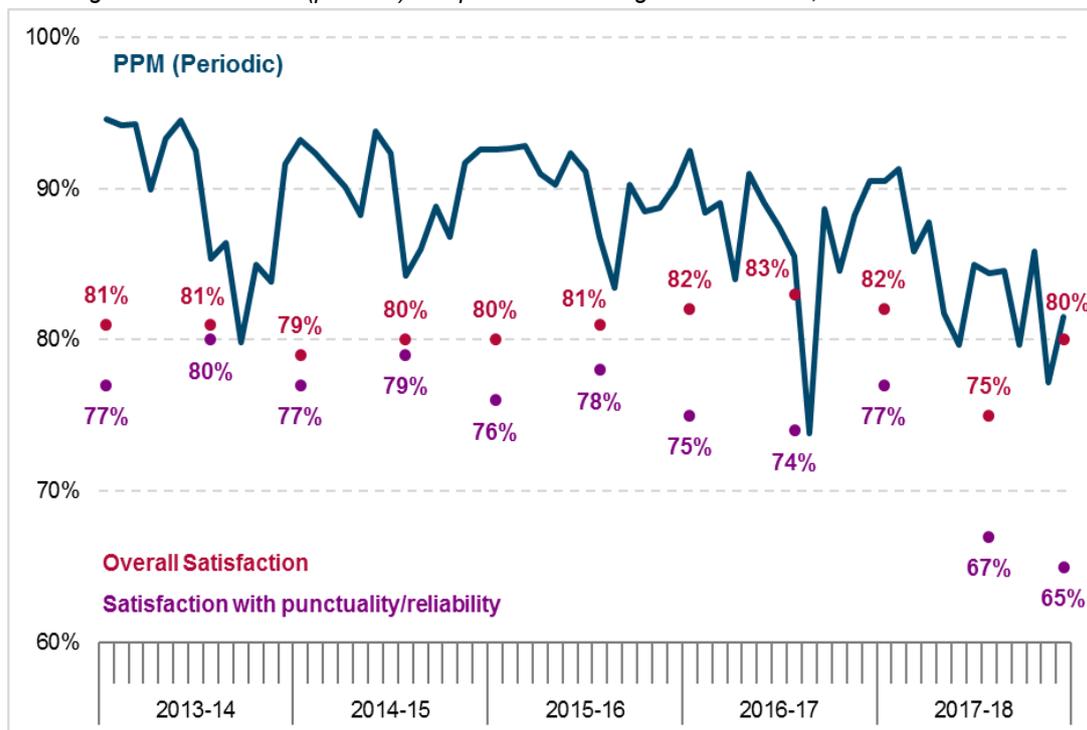
*Sourced from Transport Focus.

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[6] National Rail Passenger Survey, NRPS, Spring 2018 Main Report (see page 3):
https://www.transportfocus.org.uk/research-publications/publications/national-rail-passenger-survey-nrps-spring-2018-main-report/

[7] Overall satisfaction and satisfaction with punctuality and reliability for all SWR services.

13. In spring 2018, passenger satisfaction with the punctuality and reliability of SWR services was 65%, 12 percentage points (pp) worse than in spring 2017. Satisfaction with punctuality and reliability by TOC varied between 54% and 95%.

14. When compared with other operators, SWR performs much worse for overall passenger satisfaction and satisfaction with performance. For overall passenger satisfaction SWR is the sixth worst train operator and for satisfaction with performance it is the third worst performing train operator.

3. Overview of the Wessex route

This section provides an overview of the Wessex route and describes some of the specific circumstances that Wessex faced during 2017-18.

3.1. Context

15. Both freight and passenger services operate on the route, which is a heavily used part of the network.

16. SWR operates services from London Waterloo with mainline services to Woking, Basingstoke, Southampton Central, Portsmouth Harbour, Bournemouth, Weymouth, Exeter, Salisbury, Reading and Alton. Its suburban lines include Guildford, Dorking, Windsor, Weybridge and Shepperton. It runs approximately 1,600 trains a day serving more than 200 stations.

17. Having only one London terminal means that there are certain critical corridors, for example all its mainline service groups are significantly affected by any disruption between Woking and Waterloo.

18. The relationship between the route and SWR is described as an 'alliance'. In the alliance there are joint teams for planning, performance management, operational control and management of Waterloo station. Each alliance team is formed of both SWR and Network Rail employees with a functional head. Network Rail staff lead operational control and management of Waterloo station whereas SWR staff lead performance management and planning.

3.2. Specific circumstances in 2017-18

19. Both the route and SWR explained that, over the past year, they have faced some specific circumstances, many of which are not expected to be repeated in the short to medium term, including:

   ◾ moving staff to Basingstoke Rail Operating Centre in April 2017;
   ◾ the change of franchise in August 2017; and

■ changes to the infrastructure, particularly the 'longer trains programme' and the Waterloo upgrade.

The move to Basingstoke Rail Operating Centre

20. In April 2017, the route migrated many of its functions from Waterloo to its new Rail Operating Centre (ROC) at Basingstoke. During our review, the route confirmed this had resulted in a loss of experienced staff from the train operator in the Control. We explore the impact of this move in more detail in Chapter 6.

The new franchise

21. In August 2017, the new franchisee SWR, operated by First MTR, replaced South West Trains (SWT) that had operated on the route from 2007. Given the change to the senior leadership team, it has taken time for the Wessex and SWR to establish a working relationship. It has also taken time for the new company to become familiar with operating on the route.

The longer trains programme and the Waterloo upgrade

22. The Department for Transport is funding improvements along the route, including the longer trains programme. This programme has improved capacity on the route through increasing the standard length of trains on suburban lines from eight to ten cars. For Wessex this entails the lengthening of platforms across the network, culminating in the extension of platforms at Waterloo in August 2017. The previous train operator (SWT) introduced 258 coaches[8], and SWR is leasing new rolling stock that will replace four existing fleets in 2019.

23. To deliver the work, London Waterloo was partially closed for three weeks in August 2017. The route stated that this had a significant impact on train performance, particularly when the train plan was re-configured at short notice due to infrastructure

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[8] 24x 2-car Class 456 units, to extend 8-car Class 455 formations to 10-car (48 coaches); 30x 5-car Class 707 units, to operate as 10-car formations (150 coaches); 60x ex-Class 460 coaches, to form 6x 5-car additional Class 458 units and to extend 30x 4-car Class 458 units to 5-car, all to operate in 10-car formations (60 coaches); Total: 258 coaches

design constraints. It also stated that this reduced planned services, increased dwell times and reduced operational flexibility. Additionally a derailment closed part of the station for a day, causing about 26,000 delay minutes and led to a large possession overrun at the end of the blockade.

24.   Aside from the immediate disruption to passengers associated with the Waterloo blockade Wessex highlighted a number of operational impacts, including:

- ■ **The programme has resulted in a loss of available stabling**. Waterloo had two 8 car sidings, it now has one 10 car siding. Kingston's 8 car siding is no longer of use to the new 10 car trains. Access to Surbiton's siding now requires additional shunt moves[9]. Key sidings have had capacity reduced due to stabling the additional coaches. The route stated that the combined effect of this is the loss of capability and flexibility to amend the service in times of severe disruption. It quoted a trespass incident at Barnes on 10 July 2017 as an example. An internal review found that '*No locations to lose trains, Clapham Yard full of 707, Waterloo South Sidings out of use and Waterloo former international out of use*'. Another example provided was an incident on 13 December 2017, which quoted '*inability to berth stock during disruption'* as a key learning point;

- ■ **When the stabling is available it is less flexible**. Shunters have been removed at Staines and Guildford. 'Hop ups', which provide a safe way to access cabs in sidings are required, however the route confirmed this is missing in certain locations, which stops traincrew changing ends. The route advised that the absence of these hop ups was a factor which hindered recovery from the incident on 13 December 2017 (the second largest incident of the year);

- ■ **the layout at Waterloo changed**, and certain parts of the infrastructure are now more heavily used, therefore it requires a much more intense inspection regime. A number of points in the Waterloo throat have moved from a

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[9] Shunt moves are the alternating forward and reverse movement of rolling stock to enable access to a siding.

standard level of inspection (91 days) to an ultra-high frequency level of inspection (every 28 days); and

- with more types of units running, **greater traction knowledge is required**, and this further complicates recovery from severe disruption as not all traincrew will be competent to operate these units.

4. Wessex performance delivery to SWR services

This chapter provides an overview of our analysis of the route's performance in 2017-18. It summarises the data that is available, principally through the delay attribution process.

4.1. Context

25.   Where possible we have provided data from April 2014 to 31 March 2018 (end of period 13) to illustrate the route's performance across the current control period (which runs from 1 April 2014 to 31 March 2019).

26.   One of the key questions of our review is whether Wessex has identified the main issues affecting performance. Before we sought the route's explanation, we analysed performance data to reach our own views on what areas have caused most delay to SWR services.

4.2. Outturn against target for PPM and CaSL

27.   SWR exited 2017-18 with a PPM MAA[10] of 84.3%, 5.0pp worse than its Performance Strategy target, and a CaSL MAA of 4.5%, 1.0pp worse than its Performance Strategy target.

28.   This continued a longer term decline as illustrated in figures 2 and 3 below. Performance for SWR (and previously SWT) services has declined over the last few years. Most of this decline has occurred in the last two years. From a PPM MAA of 90.5% at the end of 2015-16, it fell to 84.3% at the end of 2017-18, a significant deterioration of 6.2pp.

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[10] 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.

*Figure 2 – SWR PPM MAA including annual targets, 2013-14 to 2017-18*
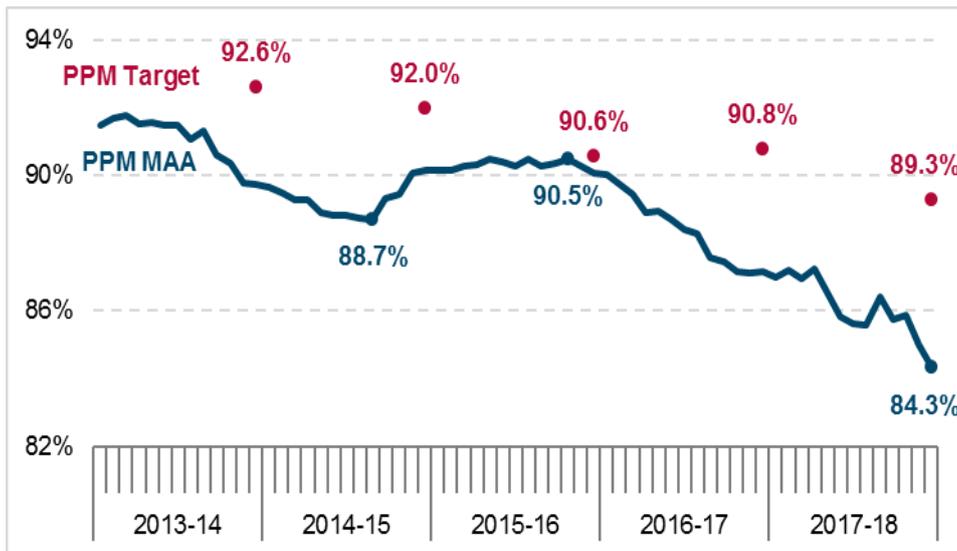
Figure 3 – SWR CaSL MAA including annual targets, 2013-14 to 2017-18
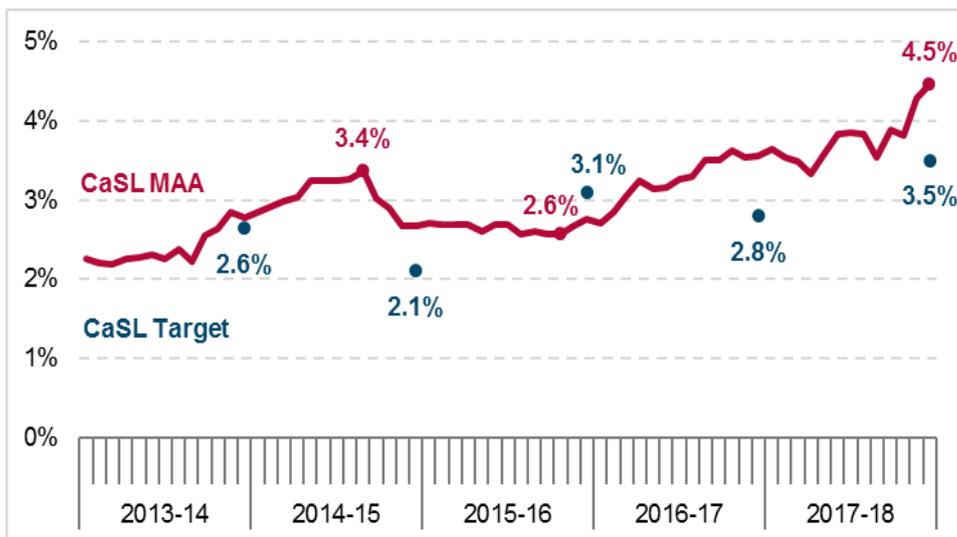
4.3. Attribution of delay caused by Wessex

29.   In 2017-18 Wessex was responsible for 68% of SWR delay minutes[11]. Overall across the whole railway network, Network Rail caused delay is typically around 60%.

30.   Figure 4 below highlights that the increase in the number of overall delay minutes is largely driven by changes to the amount of Network Rail caused delay. Delays caused by one train operator to another (TOC-on-TOC delay) has remained broadly

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[11] This represents the total number of minutes delay to SWR trains, where the cause of delay is attributed to Network Rail.

stable. While delays caused by the train operator on itself (TOC-on-Self delay) have increased, the level of Network Rail delay has increased at a higher rate.

Figure 4 – Delay minutes (MAT[12]) attributed to SWR by cause, 2013-14 to 2017-18
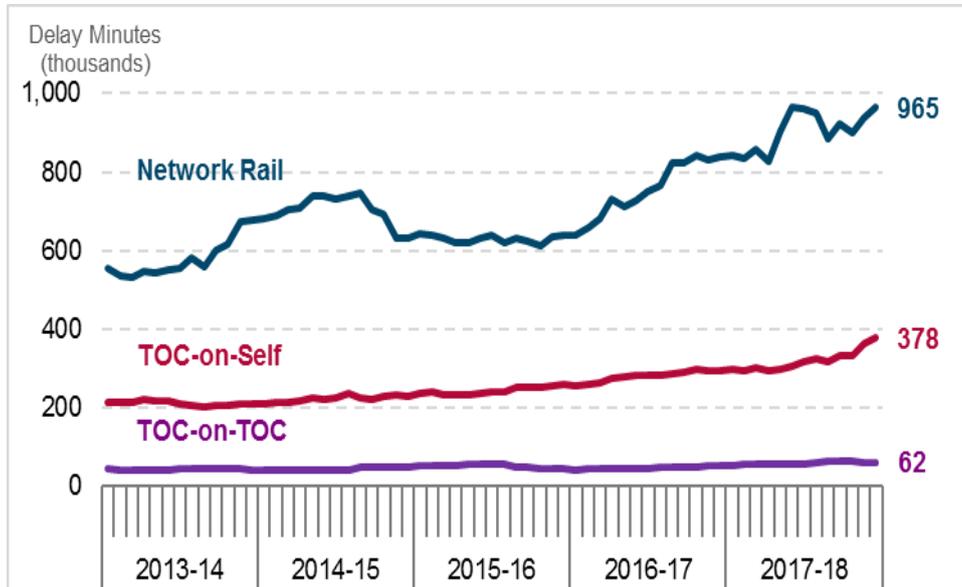
4.4. Large delay causing incidents

31. In 2017-18 there were a number of large incidents which impacted performance.

32. On 15 August 2017, during the Waterloo station blockade, a set of misaligned points caused a passenger train to derail, this incident lead to widespread disruption. The derailment closed part of the station for a day causing 26,000 delay minutes. This incident was the largest delay causing incident on the route in 2017-18.

33. Since the blockade, there have been a number of major failures of the route's assets. On 11 December 2017 a track circuit failure which was caused by a line side fire outside Waterloo resulted in approximately 23,000 delay minutes (the second biggest single incident of the year). On 13 December 2017 there was another track circuit failure at Vauxhall causing about 16,000 delay minutes (the third largest delay causing incident).

34. While we have taken account of these significant incidents, for the purposes of this review, we have assessed Wessex's delay minutes by category to establish the

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

areas that have had the greatest impact on performance.

4.5. Areas of Network Rail caused delay

35. We have reviewed each Network Rail delay category to help identify the types of incident that are causing the greatest delays on the network.

Attribution of delay caused by Network Rail - by category

36. As part of the industry's delay attribution process, Network Rail delay minutes are grouped into five broad categories:

 ■   **Network Management/Other (NMO)** includes issues with Network Rail operations and timetable problems;

 ■   **Non-Track Assets (NTA)** includes infrastructure such as train detection systems, points and power;

 ■   **External Factors (External)** this includes areas such as vandalism, trespass and police activity;

 ■   **Track Assets (Track)** which represents issues relating to problems with the track (i.e. track faults): and

 ■   **Severe Weather, Autumn & Structures (SWAS)** includes weather-related delays and issues with structures (i.e. embankment slippages).

37. Figure 5 shows that delay minutes have increased across all delay categories since 2016-17, except for External factors.

Figure 5 – Network Rail delay minutes by category

Delay Minutes (thousands)

NMO, 324
NTA, 279
External, 145
Track, 132
SWAS, 80

2013-14   2014-15   2015-16   2016-17   2017-18
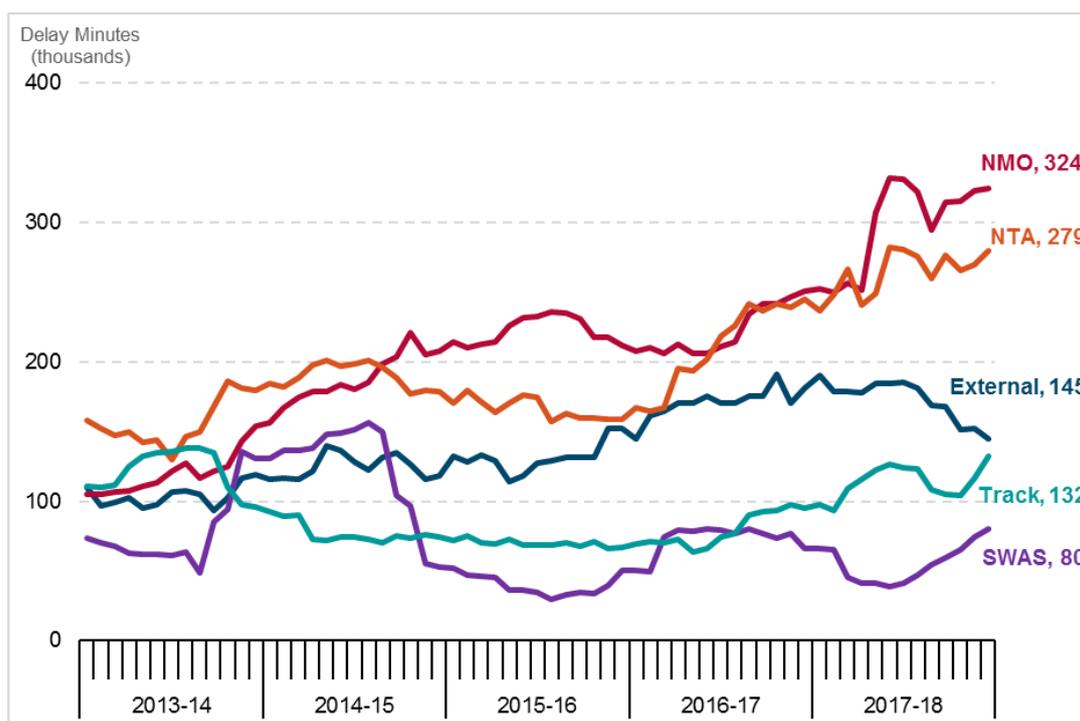
Table 2 – Network Rail delay minutes by category

Delay category	% increase/decrease in delay (from 2016-17)	Increase/decrease of delay minutes (from 2016-17)	% share of all Network Rail attributed delay minutes
NMO	29%	73,000	34%
NTA	14%	35,000	29%
External	-20%	- 36,000	15%
Track	39%	37,000	14%
SWAS	22%	15,000	8%

Network Management/Other (NMO)

38.   In 2017-18, 324,000 delay minutes were attributed to NMO causes, accounting for 34% of all the route's delay minutes.

39.   The largest increase of all delay categories has been in NMO, this has increased by 29% (or 73,000 delay minutes) from 2016-17. The increase in NMO was mainly driven by two causes: an increase of 60,000 delay minutes in Mishap (Infrastructure) causes; and an increase of 41,000 delay minutes in Track Patrols and Related Possessions. This is illustrated in figure 6 below.

Figure 6 – Breakdown of NMO delay minutes
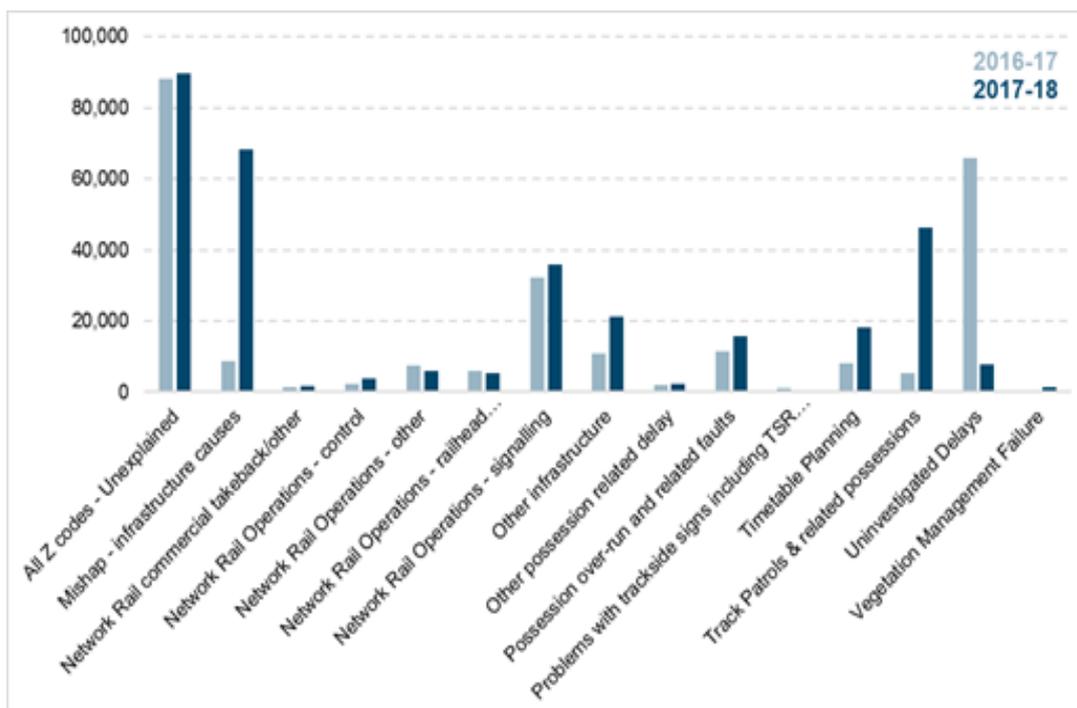
40. We noted in the previous section a number of large delay causing incidents. Delay minutes for both the train derailment and line side fire (together causing 49,000 delay minutes), were attributed to NMO. Allocation of these incidents to NMO aligns with the substantial increase in delay from period 5 2017 (as illustrated in figure 5 above).

41. Uninvestigated Delay decreased by 58,000 delay minutes. 'Unexplained' delay'[13], which may mean some delay causes are understated, remained broadly stable compared with 2016-17, although it remains a high cause of delay in this category accounting for 90,000 delay minutes.

Non-Track Assets (NTA)

42. In 2017-18, 279,000 delay minutes were attributed to non-track asset causes, accounting for 29% of the route's delay minutes. Overall, NTA delay increased by 35,000 delay minutes compared to 2016-17. This was mainly driven by two causes: an increase of 24,000 delay minutes in Points failures; and an increase of 18,000 delay minutes in Track Circuit failures.

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

43. For points failures there have been very few large delay causing incidents and the number of incidents is broadly static year-on-year. There was however a significant points failure following the Waterloo blockade (which caused 6,000 delay minutes). As noted above, in 2017-18 there was a significant level of delay caused by the track circuit failure at Vauxhall in December 2017 (causing 16,000 delay minutes).

44. On investigating the type of incidents causing delay we found that despite the increase in delay minutes for NTA, the actual number of incidents for NTA has remained broadly stable (as illustrated in figure 7 below).

Figure 7 – Overview of incident count (MAA) for non-track asset failures
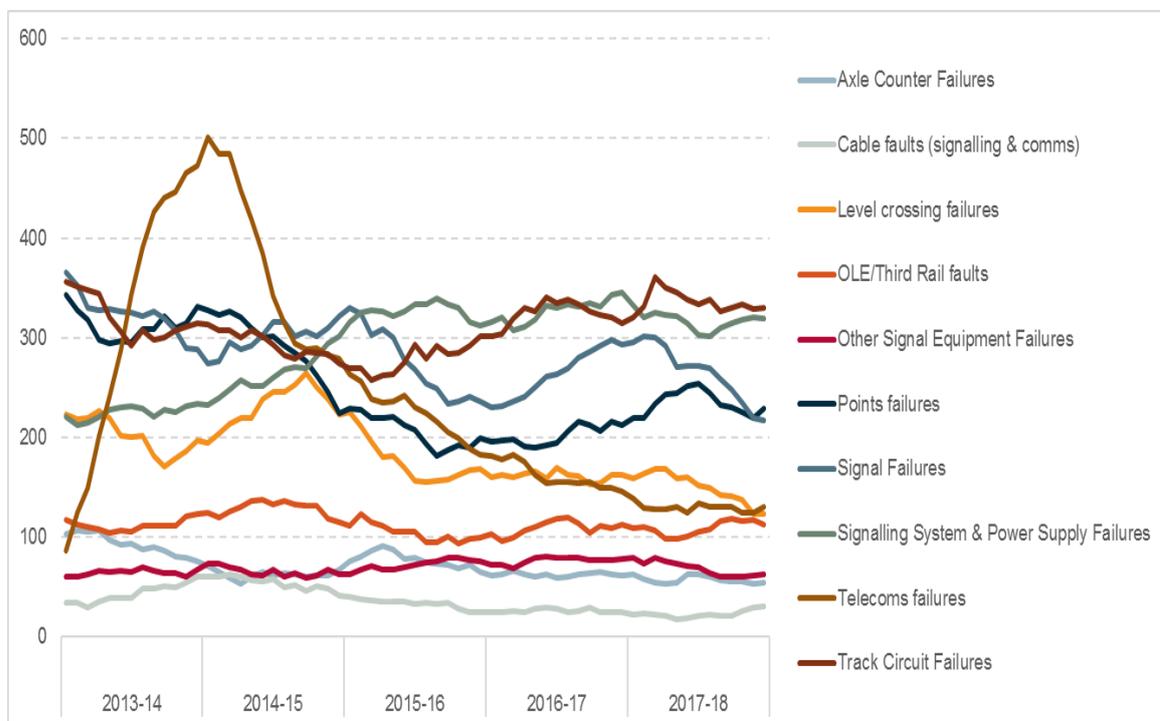
45. This highlights that the Delay per Incident (DPI) for NTA has increased particularly for Points failures and Track Circuit failures. This is illustrated below in figure 8.

Figure 8 – Delay per incident for non-track asset failures for Wessex route
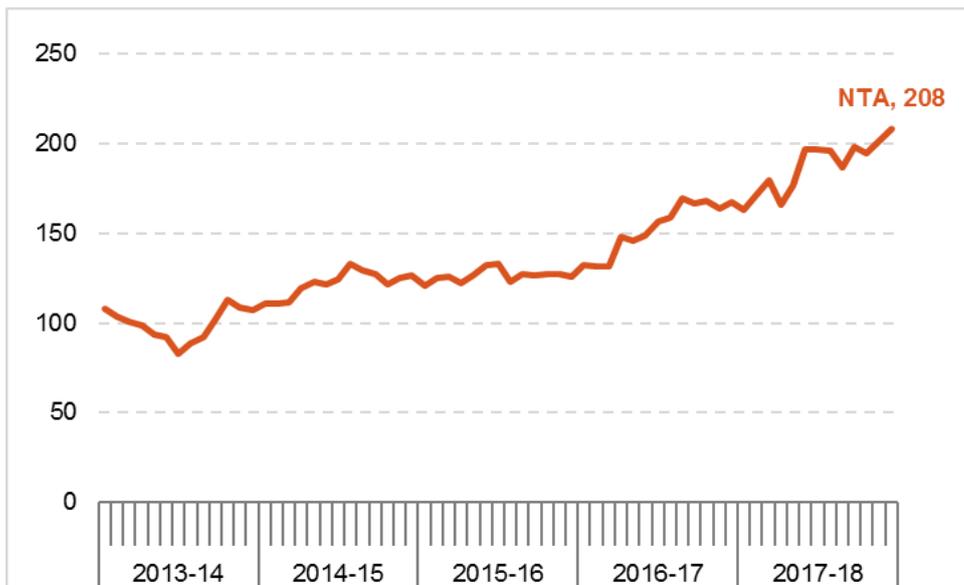
External Factors (vandalism, trespass and police activity)

46. 145,000 delay minutes were attributed External Factor causes, accounting for 15% of the route's delay minutes. External Factors experienced a decrease of 20% (36,000 delay minutes) compared to 2016-17.

47. DPI for Externals has also declined on the route, while the number of incidents remained the same. This is in contrast to most other delay categories (excluding Severe Weather, Autumn & Structures), which have experienced an increase in DPI.

Track

48. Delays due to track causes increased by 37,000 delay minutes compared to 2016-17, accounting for 14% of the route's delay minutes. This was driven an increase of 42,000 delay minutes in Track faults, as shown below in figure 9.

Figure 9 – Track delay minutes (MAT) by category, 2016-17 and 2017-18
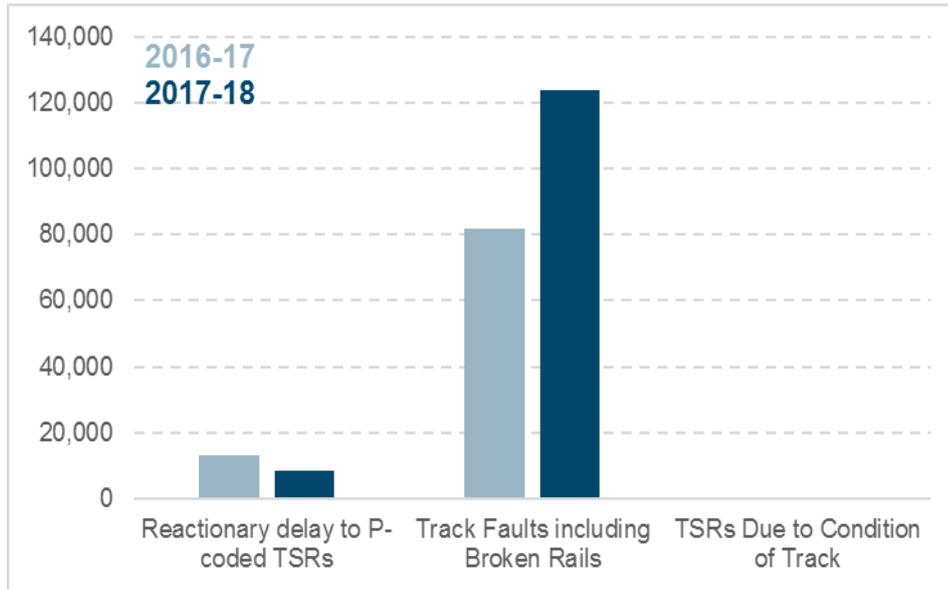
49. While we note the rise in Track Faults, when we looked at the incident count for Track, it is similar to NTA, as the amount of delay is increasing but the number of Track incidents has remained stable, as illustrated below in figure 10.

Figure 10 – Overview of incident count (MAA) for track asset failures
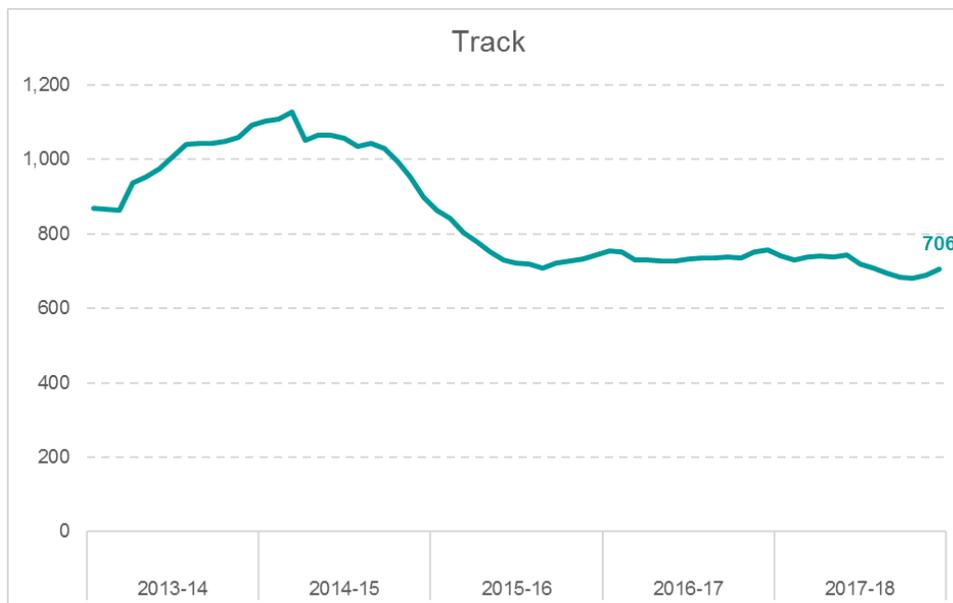
50. The incident count remaining stable but level of delay increasing means that Track Assets is also experiencing a large increase in DPI. This increase in DPI is evidenced in figure 11 below which shows a rise in DPI for Track Asset failures.

Figure 11 – Delay per incident for track asset failures on the Wessex route
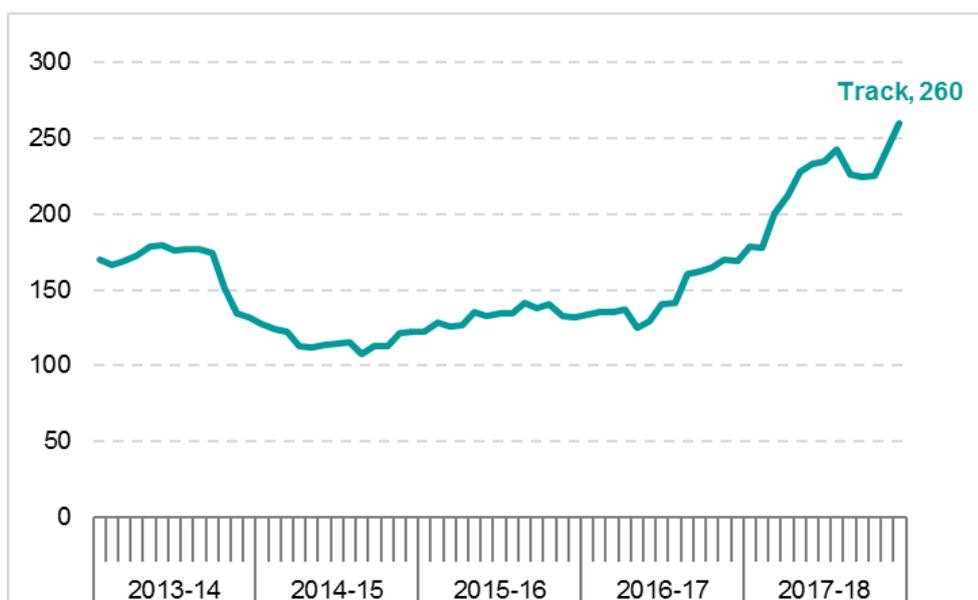
Severe Weather, Autumn & Structures (weather-related delays or structural issues)

51. Severe Weather, Autumn and Structures (SWAS) had an increase of 15,000 delay minutes compared to 2016-17, accounting for 8% of the route's delay minutes. Severe Weather (Beyond Design Capability of Infrastructure) delay minutes have remained static, accounting for 40,000 delay minutes, while Other Weather[14] (Impact on Infrastructure or Network Operations) accounted for 12,000 delay minutes.

52. Low Adhesion[15] (including autumn) had an increase of 6,000 delay minutes. The biggest weather event of 2017-18 was the extreme weather conditions in February and March 2018 (heavy snow fall and high winds). This extreme weather caused considerable delay to SWR and other operators across the country.

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[14] Other weather is classed as general weather that is not severe or exceptional.

[15] Low adhesion occurs at the wheel/rail interface where a reduced amount of friction results in loss of grip between the wheel and the rail reducing braking performance. It is common in autumn during the leaf fall season and also the onset of cold and damp weather.

Summary of delay causes

53. There has been a constant decline in SWR performance throughout 2016-17 and 2017-18, with a fall of 5.8pp in its PPM MAA in the last two years.

54. Wessex has been consistently responsible for about two thirds of all delay minutes. In 2017-18 it caused 16.5% more PPM failures than it did in 2016-2017.

55. There has been a number of significant incidents over the past year which have impacted performance, most notably following the Waterloo upgrade.

56. The biggest area of delay is in NMO which in 2017-18 accounted for 34% of delay. One of the reasons for the rise in NMO was two large incidents in 2017 (the train derailment and line side fire). This is followed by NTA at 29%. While the level of delay for External factors remains high, in 2017-18 there was a decrease of 20% (from 2016-17) in delay attributed to this category. There have been increases in Track (up 39% from 2016-17) and in SWAS (22% from 2016-17).

57. One of the most significant trends identified in the above analysis is the increase in DPI for incidents caused by asset failures (from both NTA and Track). This was because the number of incidents in both delay categories has remained stable but the level of delay minutes in each has increased – which confirms that delays are taking longer to resolve.

4.6. Conclusion

58. To investigate further whether the route is focused on the main issues affecting performance, and has plans in place which are sustainable in the medium to long term, the remaining chapters examine three important areas:

- **Network Rail's management of its assets** - the above analysis shows that the level of delay for NTA and Track assets has increased, therefore we explored the asset management challenges that Wessex faces and what it is doing to address those challenges;
- **Control** - the level of DPI is increasing, therefore we examined how Control was responding to incidents; and
- **Performance management**.

5. Asset management

The previous chapter highlighted increases in delays caused by asset failures. This chapter explores the asset management challenges that Wessex faces and what it is doing to address them.

5.1. Key issues

59. The route identified a number of challenges, as well how it was meeting them:

■ access to do engineering work;

■ maintaining adequate resources in key disciplines;

■ its approach to renewing the infrastructure; and

■ its approach to enhancing the infrastructure.

Access for engineering work

60. The route confirmed that it had a major challenge obtaining access to repair failed assets. At the Basingstoke ROC, the route employ 'flight engineers' who remotely monitor assets, such as points. This provides advance warning of a failure, enabling pro-active work to be undertaken during periods when the network is less busy, mainly at night. However, when assets do fail without warning short-term emergency access to the track is required to rectify the fault.

61. Wessex confirmed that emergency access is often difficult to secure as many areas of the route are intensively used. Control has to decide whether, in terms of train delay, the fault should be repaired immediately or after passenger services have finished for the day.

62. Providing access with a safe environment – with no running trains or live power on the electrified rail – takes time to arrange. When power is switched off (which is not always necessary), confirmation is needed there is no electricity in the electrified rail. Wessex confirmed this is a time consuming activity, particularly in areas with direct current because it can take up to twice as long to stop trains and put safety mechanisms in place (i.e. test that power is earthed). In an attempt to streamline this

process, Wessex has begun to roll out a 'Faster, Safer Isolations' programme[16]. Woking has been the first location to be trialled. It expects that this should increase productive working time during planned possessions of the running lines.

63.   Wessex has also started to roll out other Intelligent Infrastructure solutions to reduce the need for trackside access. The route has a programme to identify track cracks using Eddy Current testing[17]. In addition, it confirmed that Plain Line Pattern Recognition technology[18] will help identify issues such as railhead defects, cracks, fishplate cracks, sleeper defects or missing fasteners.

Maintaining resources

64.   Wessex confirmed that resourcing skilled railway staff in the London area is difficult because of competition from other companies located in London and several major rail projects happening in the South East of England. Evidence of this was provided at our visit to the Clapham Delivery Unit, which currently has a 15% vacancy gap.

65.   However, Wessex has reacted confidently and has adopted a tailored approach:

- for Track, the route has started to target its recruiting from outside the industry, such as the armed forces; and
- for signalling skills it is focussed on employing apprentices to provide a pipeline of suitably trained engineers.

66.   Wessex also confirmed that it has identified opportunities from the completion of major projects such as Thameslink and Crossrail, where the availability of skilled maintenance staff is improving, a factor which it considered should help to fill its vacancies.

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[16] Network Rail's Electrical Safety Delivery programme which aims to reduce safety risks to track workers, reduce the costs and impacts associated with achieving electrical isolation and improve the productivity of maintenance and renewal activities on electrified sections of the network.

[17] Eddy Current testing is a system using electromagnetism to detect and assess discontinuities in metal; adapted specialist technology to categorise maximum crack length and depth in every metre of rail.

[18] Plain Line Pattern Recognition technology is a train borne system for track inspection. It helps to identify different types of track defects (e.g. if a rail clip is missing).

Targeting renewals

67. The route confirmed its approach to renewals focuses on maintaining condition and safety as a priority, and also takes account of future requirements such as CP7 changes (i.e. the Digital Railway programme and Crossrail 2).

68. During our review, the route confirmed it will identify and seek to address on-going reliability issues, for example ageing assets on the Portsmouth Direct line (especially Farncombe to Petersfield).

69. While the Waterloo-Clapham corridor is a critical area to train performance, the route advised that there was a weak business case for renewals, as there are higher priorities elsewhere.

Impact from enhancements

70. Wessex confirmed that the layout of the network since the Waterloo upgrade has brought about unexpected maintenance problems. There was already a tight curve into Waterloo station, particularly into platforms 1 - 4 where the recent platform extension work was carried out. The new points which have been installed have resulted in even tighter curves which the route stated that it expects to result in greater wear from passing trains, creating an increased maintenance liability.

71. To address this risk, Wessex has planned to increase its inspection regime. For example the inspection regime on crossings and switch tips will be once every 28 days rather than once every 91 days, although the evidence provided showed that the route has not yet begun inspecting at this new frequency. However, inspection of Insulated Block Joints which provide separation between track circuits is now undertaken 30 times per year, as opposed to twice per year in 2015-16.

72. There are two major re-signalling projects planned for CP6. Feltham signalling centre (which controls trains in South West London out to Reading, Windsor and Shepperton) will be resignalled with a new axle counter detection system replacing a large number of poorly performing track circuits. Wessex stated that engagement between the team managing the re-signalling project and the route's Inner Maintenance Delivery Unit has helped improve the project's specification by including

consideration for the future Digital Railway. Farncombe to Petersfield will also see the replacement of a number of unreliable track circuits with modern technology[19]. Both areas will be controlled from the Basingstoke ROC once the projects are finished. Wessex has assured us that the route team has had significant engagement with these planned renewals to ensure the final designs can be maintained.

Wessex's general approach to improving assets

73.   During our review we found evidence that Wessex has embedded a 'Reliability Growth Plan', which includes initiatives to improve reliability for specific locations as well as the whole of the route. A key aspect of this plan is the use of intelligent infrastructure, with 95% of points and track circuits being fitted with remote condition monitoring. Intelligent infrastructure enables the route to detect deterioration and predict when a failure might occur. Wessex has also started to fit intelligent infrastructure to some earthworks to monitor and predict bank slips.

74.   The route confirmed that its plan is regularly reviewed and we observed that it was displayed prominently within the Delivery Unit (DU). Wessex has started to use better analysis software, such as using Tableau to provide better insight into asset failure trends and causes and Quartz to provide insight into the cause of delay and delay trends.

Track Assets

75.   As outlined in chapter 4, Track Assets cause 14% of all the route's delay, and increased by 39% compared to the previous year 2017-18. In its Performance Improvement Plan (PIP) for 2018-19, Wessex has planned to make significant investment to improve track asset reliability:

■   The introduction of a Reactive Track Maintenance team that will deliver the plain line defect workbank from Clapham to Woking, enabling two existing Track Maintenance teams to focus on longer-term preventative works. This

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[19] Britain's digital railway strategy seeks to optimise operations by integrating key digital systems, such as the European Train Control System (ETCS), Traffic Management (TM), telecoms data, Automatic Train Operation (ATO), and Connected Driver Advisory Systems (CDAS). The Digital Railway offers the prospect of improvements in capacity, performance and safety.

supports longer term asset sustainability, reduced service affecting failures and the opportunity to reduce the Maintenance backlog but is inefficient in most circumstances, apart from in the highest priority sections of its network;

■ Track Quality teams are being introduced. These teams will comprise of Network Rail and Sub-contractors who will be deployed at key locations and undertake additional activity. The aim of this is to remove service affecting speed restrictions and proactively managing non-actionable geometry faults to stop them becoming actionable faults; and

■ Additional resource is being provided in Eastleigh and Basingstoke to, amongst other things, improve resilience in hot weather and mitigate heat speeds.

Temporary speed restrictions (TSRs)

76. Wessex confirmed there has been a rise in the number of TSRs on the route. In the last 3 years, Wessex confirmed the number of unplanned TSRs[20] has risen from 7 to 25.

77. TSRs are imposed to manage critical safety risks, often based on the professional judgement of local engineers using guidelines from technical specialists. However, they have an effect on train services as trains run slower than assumed in the timetable and therefore will cause delay.

78. Figure 12 below highlights an increasing number of TSRs over the last few years.

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[20] Planned TSRs are put in place after renewal work to allow track to 'bed in'.

Figure 12 – Overview of TSRs on Wessex route (2014/15 – 2017/18)*
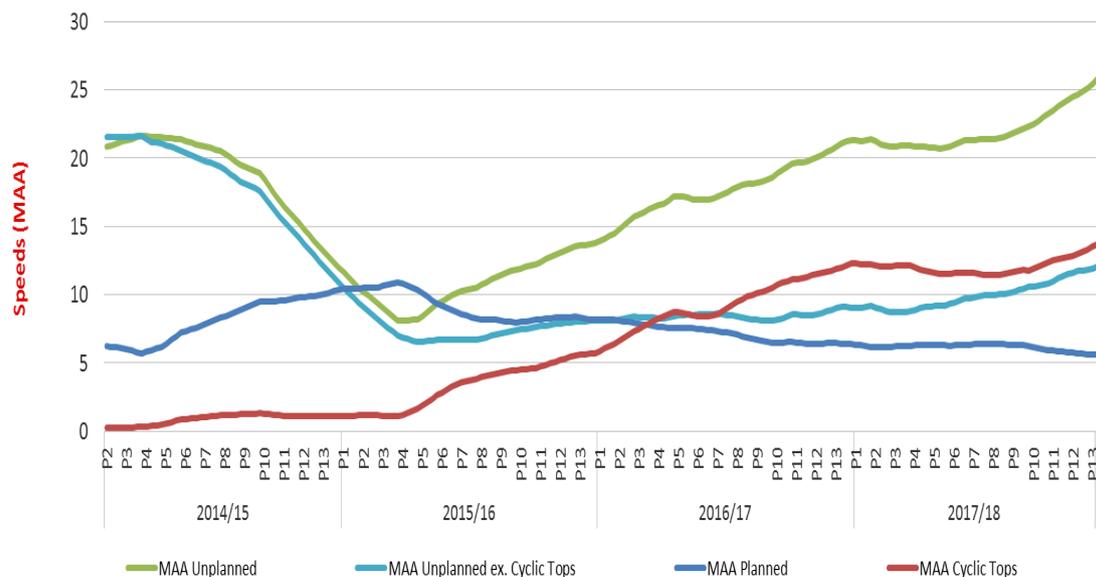
*Sourced from Network Rail

79.   Much of the increase is a result of a track geometry issue known as Cyclic-top. Cyclic-top is the result of poor track geometry and can lead to and amplify a side-to-side movement of trains which can cause, or be a factor in, train derailments (particularly on freight trains). Wessex confirmed that the increase in Cyclic-top over the last 3 years has been the main driver in the increase in Unplanned TSRs.

80.   Wessex stated that it prioritises TSR removal based on safety and performance grounds, however it is difficult to quantify performance impact. Wessex also confirmed that all TSRs have plans for permanent removal, introducing specific schemes such as the re-padding of rails to try to stop problems occurring.

81.   Wessex reported that there is an on-going need to find the most cost-effective option for TSR removal. The route cited the Ash-Wanborough line as an example, where the low Opex cost (c£5k per period) of continual tamping was preferred to the high Capex cost (£2millon) of effective embankment support.

82.   Robust and consistent data on the performance impact of TSRs is not widely available. Wessex has commissioned AMEY to review the impact of TSRs and the results of this work are expected at the end of 2018. Better quantification of each TSR's impact will enable better maintenance decisions.

83.   Wessex accepted that more can be done to target resources on the most critical TSRs for train performance. Close co-operation between the route and SWR is important in this area, as it is an area that acutely relies on track and train. We did not find close working between SWR and the route.

Non-Track Assets

Performance plans for 2018-19

84.   As outlined in chapter 4, Non-Track Assets caused 29% of all of the route's delay, and increased by 14% compared to the previous year in 2017-18. As with Track, in its PIP for 2018-19, Wessex has focussed investment to improve Non-Track Asset reliability. We found that:

- with 95% of track circuits and points monitored by remote condition monitoring Wessex has plans to double the number of Flight Engineers in the Control from six to 12. This will enable both the Inner and Outer areas to have a permanent Flight Engineer on duty, which the route considered will improve its ability to predict and prevent failures;

- Wessex has developed a CP6 renewal scheme to target improvement in reliability of track circuits on the Portsmouth Direct line, which have been unreliable for an extended period of time;

- Wessex has introduced two additional Control Centre technicians at Wimbledon Signalling Centre to improve technical capability in maintaining and repairing the signalling panel at Wimbledon. This should increase reliability and reduce the time it takes to repair faults; and

- the route has also started to trial a cross discipline response team (signalling, track, operations) at Surbiton to reduce signalling failures. This would respond to weaknesses identified in the Surbiton area.

Signalling and electrification

85. Wessex confirmed that Track Circuits failures[21] have been a particular problem in the Waterloo area, as a single track circuit failure can restrict access to multiple platforms at the station. In its CP6 plans, the route has targeted improvements to track circuit reliability between Clapham Junction and Waterloo by 20% (from a 2015-16 baseline).

86. To tackle failure of the traction electrification system (the 3rd rail), Wessex has started a scheme to double the amount of traction cable. This should mitigate the impact of power failures in a single traction current feed.

5.2. Train operator (SWR) views

87. During our review, we discussed asset management with SWR. Overall SWR considered that Wessex is approaching the challenges in a positive manner. SWR recognised that there are multiple challenges for asset management on such a congested route and noted the issues with DPI.

5.3. Conclusions

88. Overall, we found evidence of good practice from Wessex in relation to how it manages its assets.

Has the route identified the main issues affecting performance

89. Wessex has identified the issues that affect its ability to manage assets. These included access to the track, resourcing of its signalling, track and electrification teams, investment in renewals to improve reliability, the challenges of TSRs and the effect of previous and future enhancements. All of these issues will impact performance.

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[21] A vital function of the signalling system is to detect the position of trains, with track circuits one of the systems that does this. Failure of a track circuit causes signals to be held at red, often resulting in significant delay.

Does it have appropriate plans in place to deliver improvements in the short term

90.   Wessex has appropriate plans to tackle the issues it has identified. Its PIP has listed a number of schemes which tackle reliability through better targeting of resources. These include tackling the maintenance backlog and recruiting staff to posts such as Flight Engineers in Control and signalling technicians at Wimbledon.

91.   However, we also found that the '*project on a page*' in the PIP only provided a high level approach. For example, the Reliability Growth Plan '*Outer*' PIP NR05 (as of 8th June) states that '*plans for 2018/19 are currently being developed*', but by 30th June the plans will be '*commencement of delivery. Benefit cut in*'. During our review we found other examples of this in the PIP. We expect Wessex to improve this and it also needs to work effectively with SWR to identify the biggest service affecting TSRs.

92.   The route provided evidence of a good track record on delivery, for example there have been a high number of asset reliability projects delivered in the last three years and when compared to all other Network Rail's routes, Wessex has improved its asset reliability the most in CP5 (figure 13)[22].

Figure 13 – Overview CRI (Network Rail Composite Reliability index 2014 – 2018)

CRI by route 2014-15 to 2017-18 P13 (GB Network)

GB
Wessex
South East
LNE&EM
LNW
Anglia
Scotland
Wales
Western

Source: Network Rail

Financial Year: 2014-15, 2015-16, 2016-17, 2017-18
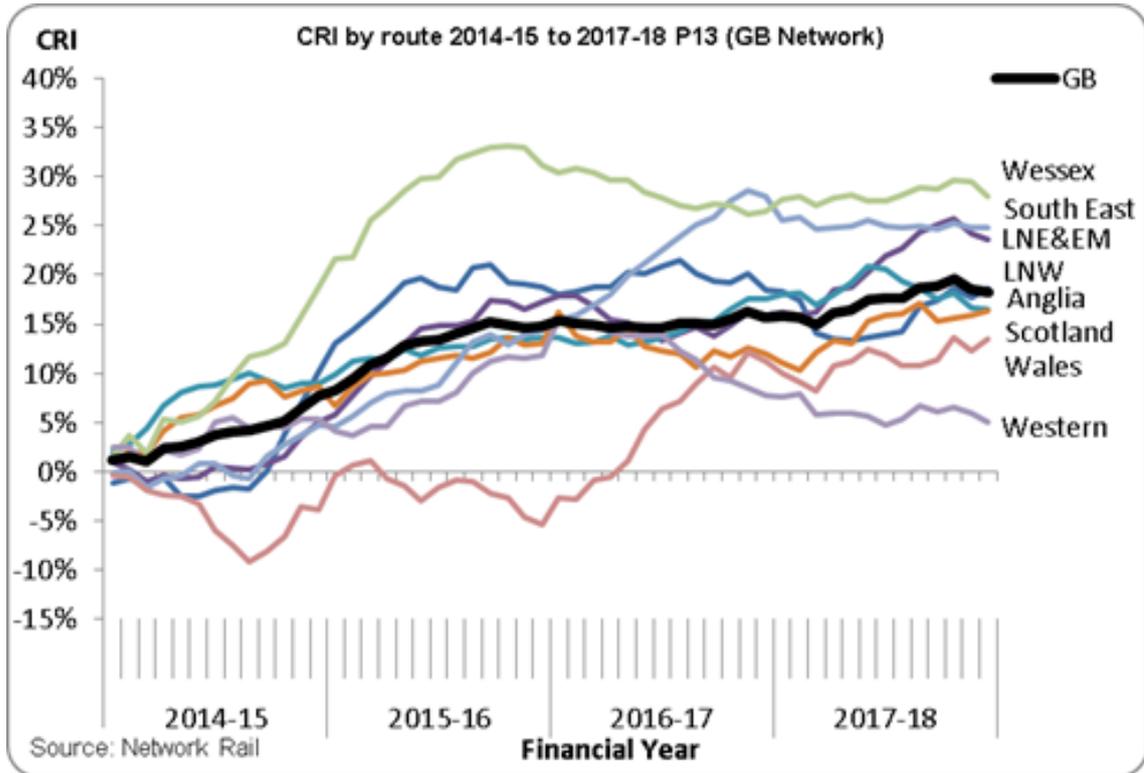
Are the route's plans sustainable in the medium to long term

93.   Given the asset challenges identified from the evidence gathered during our review, and comparing these to the performance activities in Appendix A of Wessex's route strategic plan for CP6, there was clear alignment. The plans included '*Increase in Asset Reliability associated with the Reliability Growth Plan*', reducing TSRs and improving track circuit reliability between Waterloo and Clapham.

94.   We are also aware of other longer-term initiatives that are outside the PIP, for example the Faster, Safer Isolations project which will increase the amount of engineering work that can be done during available access.

95.   For CP6 Wessex has targeted its renewals on the most vulnerable and critical assets and has maintenance volumes assigned to mitigating risk over the portfolio. It also has plans to grow its 'predict and prevent' capability, in line with its Asset Policy, to better target its planned proactive maintenance. This should increase the reliability of the network and reduce infrastructure failures. One of the key challenges for the route in the medium to longer term will be the major enhancements at Feltham and

on the Portsmouth Direct line, however Wessex provided evidence of a good level of engagement between the route, SWR and the teams delivering these projects.

96. One of the main constraints on the route is delivering within a constrained funding envelope. Many of the schemes in 2018-19 (such as additional resources) are being financed through increased on-going operational expenditure.

6. Delivery of operational control

In chapter 3 we identified that one of the recent key challenges for Wessex was the move of its control centre from Waterloo to Basingstoke. This chapter examines: the function of the Wessex Control; the move of Control to Basingstoke; and what the route proposes to do to optimise the delivery of the Control.

6.1. The function of Control

97.   The Wessex Control is based in the Basingstoke ROC. The ROC is responsible for the delivery of the train service and manages incidents as they occur. It performs a number of functions:

- For Wessex, it monitors the condition of the infrastructure assets on the route and provides specialist technical guidance to local engineers. It organises response to incidents for all parties (such as the route's engineers and the emergency services) facilitating real time management of response to incidents;

- For SWR it manages the SWR fleet in real-time, providing specialist technical guidance to fleet engineers and is the hub for the provision of information to passengers; and

- For both the route and SWR it is the central repository for attributing delay from incidents that allocates causes of delay.

98.   To function effectively Control needs to: operate in a well-ordered environment; have sufficient technology; have motivated and engaged staff; and have appropriate processes in place.

99.   Over the last five years Wessex has migrated many of its functions to the ROC in Basingstoke. It is set to become a central operating hub, with the route's headquarters, training centre and operational activity (such as signalling, electrical control and operational control) all located in one place. The signalling and electrical control activities have not yet moved to Basingstoke but these areas will migrate in

conjunction with planned signalling renewals and re-control work.

100. The Control function at the ROC is managed jointly between Wessex and SWR. It relocated from Waterloo in April 2017. This was considered the best time as it was before the blockade and franchise change both happening in August 2017. The design and layout has been carefully planned to embed a culture of joint working and locate functions that interact closely to manage the 'system' next to each other. For example, Service Delivery Managers who take an overview of the SWR daily train plan and Information Controllers who organise the dissemination of information to passengers were located in close proximity. Similarly, Incident Controllers who manage the route's response to infrastructure incidents are located next to 'Flight Engineers' who monitor Wessex's intelligent infrastructure.

101. Some of SWR's functions did not move from Waterloo, such as fleet planners, driver resource managers and train service managers. The route explained that the physical distance between these and the rest of operational control functions in Basingstoke makes co-ordination during severe disruption more difficult.

102. During our review the Head of Control confirmed that a consequence of the move was a loss in train operator staff (c.80% of Train Service Managers). This is supported by what we were told by SWR following the ROC move. At a meeting in August 2017, the Head of Performance for SWR confirmed that the ROC move had led to high staff turnover and new staff had been recruited (noting that most of the delay attribution staff were new to the railway so there would be a steep learning curve). In contrast, Wessex confirmed that it did not encounter significant levels of staff resignations. During our review both Wessex and SWR confirmed that the ROC is now fully staffed.

103. We found consistent feedback from our visits and meetings with both the route and SWR staff that the new centre has greatly improved the working environment, which is a much calmer environment enabling better decision making and clearer communication between colleagues.

Contingency plans

104. Contingency plans are a key tool to speed up service recovery when there is severe disruption on the network. They set out alternative train services that should be implemented in the event of major service disruption, such as the emergency blockade of one or more running lines. Plans should:

- ■ reflect operational realities (such as resource levels);
- ■ be agreed between both Network Rail and train operators; and
- ■ be regularly updated to take account of changing circumstances.

105. Wessex explained that its plans had not been updated since 2011. We found that the plans contained the right operating principles, for example diversionary routes remained the same. However, they did not match current operational practices. Since 2011 traincrew diagrams have become more efficient and complex. As a result matching resources to diversionary routes has become very difficult. In Wssex's PIP, it stated that '*the current set of plans were written when the complexity and flexibility of train crew diagrams was significantly different*' which means they '*have limited the ability of the control to efficiently recover incidents*'.

106. An example of the importance of contingency plans was the response to an incident on 13 December 2017. Raynes Park was used as a termination point, despite its long narrow platforms making it susceptible to overcrowding. A more up to date contingency plan would have taken this into account and could have helped identify revised service patterns that were better for passengers.

107. Wessex has recognised the shortcomings in its contingency plans, and stated in its 2018-19 improvement plan that the plans '*require enhancement or rewrite to ensure they are fit for purpose*'. The route is currently working with SWR to do this and is targeting completion by the end of August 2018. This is critical for improving operational responses to incidents.

Standard Operational Processes (SOPs)

108. While all incidents are different, there are some standard approaches to responding to them, which follow best practice learned over time and across the country.

However, we found some evidence that SOPs have not been followed by Wessex. For example:

- after a track circuit failure at Vauxhall in December 2017, it was identified that standard processes were not carried out. In this case, an Asset Response Manager (part of the on-site co-ordination team) was not appointed, which slowed down the response;

- following another incident, a fatality at Queenstown Road on 24 April 2017, the Wimbledon Signalling Centre, who control the affected area, were not included on the conference call to determine how to respond; and

- during a trespasser incident on 10 July 2017 (causing 4,500 minutes delay) at Barnes, 'an Operation Tracker' which co-ordinates traincrew during severe disruption on the network, was not brought into use until 3 hours after the event.

109. In its performance plans for 2018-19, Wessex has recognised the need for better SOPs. It has planned to produce new SOPs for Emergency Block Working (EBW) (facilitating faster and more effective setting up of EBW) and the response to significant track defects. In addition to this, we were told that Control has developed a SOP for fatality management, which will stipulate five immediate actions and five follow up actions.

Technology

110. One of the key challenges of Control is to communicate quickly and act flexibly. We found that Wessex relies on legacy systems. It will continue to use legacy systems that require manual effort to undertake activities that could be fully automated.

111. The route has been appraising the case to install the Cognify Incident Management System, as used on railways in the Netherlands. This is designed to accelerate processing information when there is an incident and enable it to be resolved quickly. Wessex is awaiting the outcome of the implementation of new technology on other routes to help support a business case to make an investment decision. It is unlikely that this new technology will be available until 2020.

People

112. Wessex has recruited a Senior Incident Officer (SIO) function to work alongside the Control function, reporting directly to the Chief Operating Officer. The SIO has direct reports who work in control on a 24x7 basis. Their role is to manage actively an incident, relieving the Control Manager of this activity.

6.2. Conclusions

Has the route identified the main issues affecting performance

113. As highlighted in Chapter 3, there are certain factors that are affecting the route's delivery, such as the move to Basingstoke ROC and infrastructure changes. Wessex has stated that these factors have affected its ability to cope with disruption, and as a consequence, recovering from and managing incidents is challenging. To mitigate the impact of these issues, it needs to have a highly effective Control function to manage disruption. Wessex has recognised what steps it needs to take to improve its processes (such as contingency plans) and is considering further investment in technology.

Does it have appropriate plans in place to deliver improvements in the short-term

114. Wessex needs to be actively managing the challenges it faces in its Control so that it can manage the response to incidents and changes to the train plan, which are essential for DPI to be reduced. Its PIP only has one plan specifically focused on improving operational control. This is PIP '*NR28*', which focuses on Train Service Contingency plans. We consider that there is more the route can do.

Are the route's plans also sustainable in the medium to long term

115. In Wessex's plan for CP6, it has referred to the need to reduce DPI, but the explanation it gave contradicts the evidence gathered during this review. The CP6 plan states '*An important underlying factor to the rising DPI is network congestion, which means that further significant improvement in train performance is dependent on realising new capacity from our enhancement schemes*'.

116. A medium to longer-term opportunity is for Wessex to plan to install technology to automate many of the activities that must be undertaken during disruption. SWR is installing a system to help with the train service during disruption, with an expected

delivery date of May 2019. Wessex is considering whether to install a similar system for managing incidents, but is waiting on a trial of this system in other routes before deciding whether to proceed.

7. Performance planning processes

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

7.1. Background

117. Wessex and SWR have a joint performance team under the alliance. The team has a number of roles such as: attributing delay; analysing performance data; and constructing plans to improve performance. Managing improvement is governed through a joint 'Performance Steering Group'. Wessex's Managing Director and SWR's Managing Director jointly chair this meeting.

118. We had several meetings with the route and attended the Performance Steering Group to see first-hand how it operated. We scrutinised the route's 2018-19 PIP and assessed a sample of incident learning reviews (ILRs). We examined the three components of the planning cycle (i.e. plan, do, review):

  - Plan – have appropriate targets for the coming year been set, and have plans been put in place to meet them?
  - Do – have resources been put in place to support the plan?
  - Review – has reporting been effective, and have the right lessons been learned from specific incidents?

7.2. Plan

Performance targets

119. Wessex and SWR have agreed a Performance Strategy target of 86.5% for 2018-19, it confirmed that this is the lowest target since the 2004 timetable change, when a large uplift in performance occurred.

Performance Plans

120. The route's PIP for 2018-19 has not been finalised but the latest version provided a high level overview of a number of Network Rail schemes to improve performance. At the time of our review we found that a number of these schemes require further

development and quantification. The plan is forecasting a 1.4pp improvement in PPM over the forthcoming year.

121. The latest plan covered all of the Network Rail delay categories covered earlier in this document, as well as operational response and recovery. Wessex has constructed the plan 'bottom up'.

122. Given the early stage of plan maturity, the 1.4pp forecast improvement has been based on indicative plans and could vary considerably. Additionally there was a lack of analysis of interdependencies between schemes, resource requirements and risk management. Wessex reported that it anticipated that its plans would be finalised by early July 2018.

123. The plans included a number of enabling schemes, which have indirect benefits, so they are not quantified in PPM terms:

- improving train delay attribution following the loss of experienced staff as a consequence of the move from Waterloo to Basingstoke;
- improving data availability, Wessex confirmed that its current use of data within performance is too narrow i.e. it excludes data from Human Resources on absence; and
- improving analytical capability, Wessex confirmed that there is an immediate need to address the lack of analytical capability and capacity within the performance team.

124. They also included a number of schemes aimed to tackle:

- **incident response** – including standardising Mobile Operations Managers (first responders to incidents) vehicles and equipment, providing them with back to back radios and a system for them to be tracked by the Control;
- improving **standard operational processes** (SOPs) – as mentioned earlier in this document; and
- managing **external events** – by establishing an emergency intervention unit at Guildford and re-introducing a crime manager.

125. While Wessex has a draft plan in place it advised that SWR was still developing its own plans. As such, Wessex could not finalise its plans until SWR had done so.

7.3. Do

126. We found that the maintenance plans aligned with the overall strategy but were not complete, for example a recurring key action was to '*track benefits at Steering Group'*. We also found that an unrealistic amount of time has been allocated for the recruitment of the additional resources. However, the route's track record of delivering projects over the last three years has been good, it has delivered 133 asset reliability projects. It also has a good track record in CP5 for improving asset reliability (explained in chapter 5).

127. For the enabling schemes we found that the plans are at an early stage of development and have little detail. For example, the only action against '*Improving Data Availability'* was to '*agree data sharing with other functions in Quarter 1'* and '*agree long term strategy for data warehouse in Quarter 2'*, with no follow up actions for the rest of the year. Likewise '*Improving analytical capability'* has action in the first quarter but no follow up for the rest of the year.

128. The operational schemes have similar shortcomings. We found that the proposed actions were high level and in most cases reported as '*track benefits at Performance Steering Group'*. We also found that resources had not been matched to the improvement schemes. For example, the development of SOPs must be fully embedded and being used whenever needed, which will take time to be fully effective. Wessex confirmed that the level of work being delivered by the accountable managers provided little or no spare capacity to deliver these projects, alongside other day to day activities.

7.4. Review

Performance Reporting

129. Plans have been put in place to improve data availability and improve analytical capability.

Incident Learning Reviews

130. The ILR process is designed to review incidents of more than 1,000 minutes with those involved, leading recommendations for remedial action. Wessex advised that at the end of each shift a short additional review is held to review how certain incidents were managed. Daily conference calls are also held to review the previous day across. However, for the purpose of our review, we focussed on the ILRs.

131. We reviewed a sample of ILRs and found that the standard process is not being adhered to. Specifically we found that:

- they were only held for a small minority of incidents, not all large incidents: 22 ILRs were held in 2017-18 however there were over 90 incidents that were over 1,000 minutes;

- some ILRs were held several weeks after an incident had occurred, none of the ILRs we sampled had actual dates stating when they were held;

- timescales for many actions were vague, out of the six ILRs we reviewed, the actions contained a large number with 'to be confirmed' for the completion date; and

- there was no central assurance process and the lessons from each review were not fed into broader business planning such as the PIP or route strategic plan.

132. In its response, Wessex stated that:

- an ILR is not always necessary for relatively straightforward incidents, an ILR we reviewed for a bridge strike on 12 September 2017 (causing 4,800 delay minutes) between Brookwood and Farnborough illustrated this point as no key actions were identified from this 'one-off' incident;

- other informal review processes, such as end of shift de-briefings provided learning, or the daily national conference, undertook a similar function;

- with staff working varying shifts, it had been difficult to ensure all those who need to feed in to the ILR were able to provide input; and

- due to the way ILRs have been managed, there was a strong dis-incentive on local managers to hold them, as actions from them may create additional work in their already busy schedules. As a result, ILRs tend to focus on

positive aspects, rather than anything that requires further action. The bridge strike incident mentioned above was an example of this.

133. In its own review of the ILR process, the alliance performance team has described the current process as being '*not robust*'. The 2018-19 Performance plan described how ILRs are generating the correct actions and lessons, but that the lessons were not being learned. As with other plans, there was very little detail beyond '*Consult, rewrite and roll out new incident learning process'*. Wessex has advised that changes have been made establishing: set criteria to judge an incident; timescales to be met; and governance of the learning process.

134. While the route has stated that it intends to rectify the deficiencies in the ILR process, we have not been assured that this will be sustainable. Wessex should embed effective learning of lessons and revisit its approach to ILRs. As established in chapter 4, SWR performance has been impacted by several large incidents and DPI is also an issue. It is therefore critical that Wessex is making effective use of the ILR process to help minimise the performance impact of future incidents.

7.5. Conclusions

135. Overall, we have concerns around the route's performance planning. While Wessex appears to be addressing the challenges it faces (for example it has plans in place), our interrogation of its plans has exposed issues particularly with the level of detail and commitment to deliver solutions to address those challenges.

Has the route identified the main issues affecting performance

136. The route, through the joint performance team, has recognised a number of areas where there are issues in delivering improved performance. Wessex recognised the need for its plans to be better governed to ensure schemes are delivered. It also recognised that the Performance Team needs to be adequately resourced with appropriately skilled staff. Wessex has recognised the problems with ILRs.

Does it have appropriate plans in place to deliver improvements in the short term

137. Wessex has included a number of improvement schemes in its plan that correlate with the issues identified, such as improving delay attribution, improving data availability and improving analytical capability. The Operations plans, including plans on Operational response and tackling 'External' incidents were based on performance data.

138. There are shortcomings in the route's ILR process, and a failure to use lessons learned to inform future plans. While we were provided with evidence of an improved ILR process being initiated, this did not address the core underlying issues of why the process was not working.

139. Despite being three months into the performance year, improvement plans were still at an early stage of development. The operations team's plans were more mature, however timescales were optimistic. For example to address the issue of swans on the line, the route gave a benefit realisation date of 01 July 2018, with all training complete and all equipment purchased by that date. This has not occurred.

140. We were also not fully assured the route's capability to deliver its performance plans.

Are the route's plans also sustainable in the medium to long term

141. Given that we have concerns around Wessex's plans to deliver improvements in the short term, we do not have confidence there are sustainable plans for the medium to long term.

Annex A – Glossary

CaSL	Cancellations and Significant Lateness
CP5	Control Period 5 (1 April 2014 – 31 March 2019)
CP6	Control Period 6 (1 April 2019 – 31 March 2024)
CRI	Composite Reliability Index
DfT	Department for Transport
DU	Delivery Unit
DPI	Delay per incident
Derailment	When a train's wheelset runs off or leaves the track
FOC	Freight Operating Company
GB	Great Britain
GSM-R	The Global System for Mobile Communications – Railway
ILR	Incident Learning Review
JPT	Joint Performance Team
KPI	Key Performance Indicator
LNE	London North Eastern
MAA	Moving Annual Average
MAT	Moving Annual Total
NMO	Network Management/Other. This is a KPI category.
NTA	Non-Track Assets. This is a KPI category.
NRPS	National Rail Passenger Survey
ORR	Office of Rail and Road

PPM	Public Performance Measure
PR18	Periodic Review 2018
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.
SWAS	Severe Weather, Autumn & Structures. This is a KPI category.
TA	Track Assets. This is a KPI category.
TF	Transport Focus
TOC	Train Operating Company
TSR	Temporary Speed Restriction
Wessex	The Wessex route, part of Network Rail Infrastructure Limited

Annex B - List of meetings held as part of investigation

Organisation	Date	Subject
Network Rail Wessex route	23/03/2018	Wessex route performance review meeting
SWR	10/04/2018	SWR review
Network Rail Wessex route	08/05/2018	Meeting with Network Rail at Clapham Delivery Unit
SWR	11/05/2018	Meeting with Head of Performance
Network Rail Wessex route	11/05/2018	Meeting with CMO Wessex route at Basingstoke ROC
Network Rail Wessex route	15/05/2018	Meeting with Chief Operating Officer
Network Rail Wessex route	16/05/2018	Teleconference with Network Rail Asset Management Team
Network Rail Wessex route	17/05/2018	Meeting at Basingstoke ROC

Annex C - Key supporting documents

- 2018-19 Performance Plan – Network Rail Wessex route

- E-mail correspondence with the Wessex route

- Incident Learning Reviews – Network Rail Wessex route

- Meeting minutes from meeting with the Wessex route

- Meeting minutes from meeting with SWR