
Southern & Network Rail Performance Improvement Plans



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1. Introduction

Delivering good performance is a key objective for Southern – we know how important this is for our passengers. Train service performance is linked directly to how satisfied our passengers are and how successful our business is.

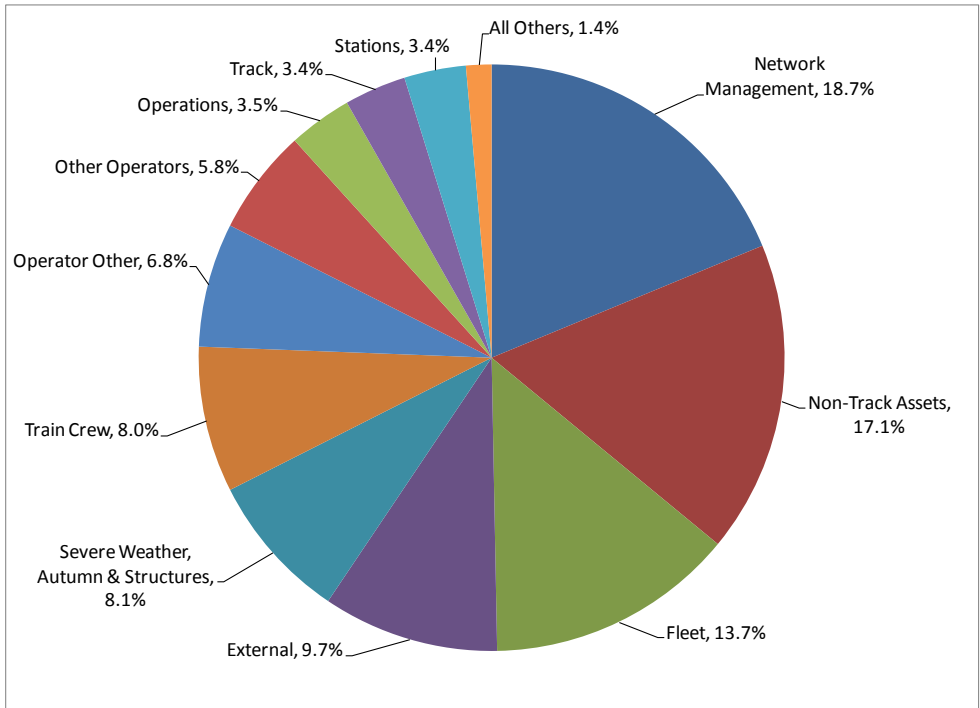
Operating on what is probably the busiest (and growing) part of the UK rail network presents a number of challenges and, as we negotiate through a period of considerable change designed to deliver improvements on the network, that challenge is increasing.

Changes, including the introduction of brand new train fleets to provide longer trains, the Thameslink programme works to massively increase network capacity and the delivery of major signalling and track renewal schemes to improve performance, all require us to adapt our operation, manage risks and deliver the daily train service as well as we possibly can.

It is more important than ever during these times that we share our performance improvement plans, which we develop jointly with Network Rail as part of an ongoing process, to explain what we are doing to improve core performance and mitigate the challenge ahead.

David Scorey
Deputy Managing Director
Southern

2. Current Factors Affecting Performance

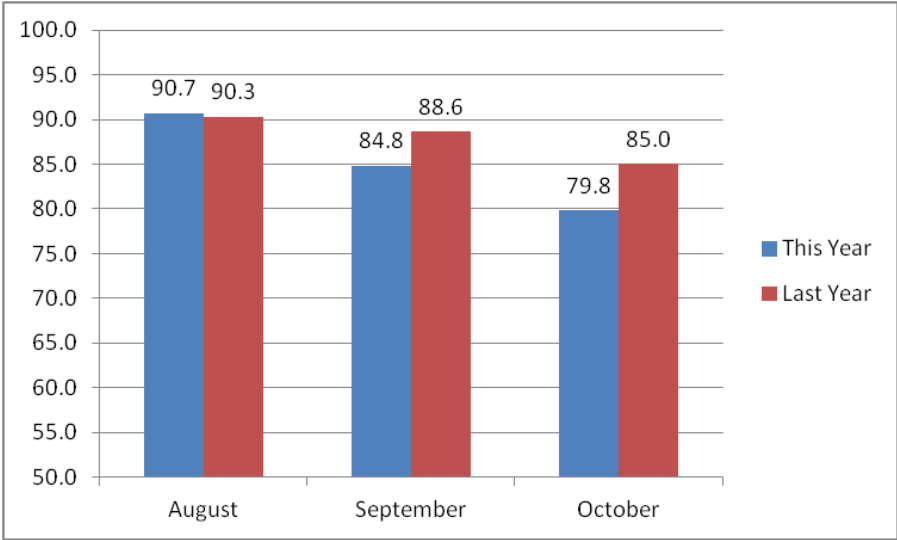


Long term trend analysis is important to understand repeating delays and enable proper focus. Over the last five years performance has been affected by a number of factors as detailed above, which shows the delay impact of various industry-categorised causes. These are expressed as a percentage of overall PPM reduction.

PPM stands for Public Performance Measure and reflects the percentage of trains which arrived at their final destination within five minutes of timetable and were not cancelled for any part of the journey.

Title	Examples of Events	Lead
Network Management	Signaller actions, management of major disruption, speed restrictions	Network Rail
Non-Track Assets	Signalling faults, power supply faults, points problems	Network Rail
Fleet	Faults on trains/train breakdowns	Southern
External	Fatalities, trespass, vandalism, ill passengers, events next to the railway that affect railway operations (e.g. discovery of old ordnance or discarded gas bottles)	Joint
Severe Weather, Autumn & Structures	Storms, flooding, snow, bridges hit by road vehicles	Joint
Train Crew	Driver or Conductor related delay including short term sickness, shortage of crews or operating errors	Southern
Operator Other	Planning errors	Southern
Other Operators	Impact on Southern from delays elsewhere	Network Rail
Operations	Minor lost time during a journey	Southern
Track	Rail faults	Network Rail
Stations	Trains taking too long in platforms, ill passengers on station, some station defects (e.g. loss of lighting)	Southern
All Others		Joint

PPM Performance – Last Quarter



Performance Commentary – Last Quarter

August showed a slight improvement on the same month last year, though the challenges started in earnest with the Thameslink works and infrastructure restrictions at London Bridge. These started to be felt from the beginning of September and continued into October, with the annual seasonal impact also making itself felt. Major incidents are overleaf.

Incidents which reduced daily PPM by more than 5% were:

Date	Issue	PPM Loss %	Industry Category
01/10/14	Electrical problem East Croydon	13.9	Network Management / Other
19/09/14	Road Bridge Hit Norwood Jcn	12.2	External
17/10/14	Train fault Victoria	11.1	Traincrew
03/09/14	Signalling problem London Bridge	10.1	Network Management / Other
12/09/14	Operational Incident L. Bridge	9.9	Traincrew
28/10/14	Points Failure N. Of E. Croydon	9.8	Non-Track Assets
08/09/14	Track Circuit Failure L. Bridge	9.6	Non-Track Assets
11/09/14	Person Struck by Train (Horley)	9.6	External
23/09/14	Track Circuit Failure Hayw'ds Hth	8.9	Non-Track Assets
07/09/14	Track Circuit Failure Selhurst	7.5	Non-Track Assets
24/09/14	Person Struck by Train (Wiv'field)	7.4	External
10/08/14	Electrical Problem Clapham Jcn	6.5	Non-Track Assets
11/08/14	Track Defect Clapham Jcn	6.1	Track
04/08/14	Points Failure at Selhurst	6.0	Non-Track Assets
12/10/14	Engineering error Horley	5.9	Network Management / Other
21/10/14	Signaller error Sanderstead	5.8	Network Management / Other
25/10/14	Track Circuit Failure Selhurst	5.5	Non-Track Assets
26/10/14	Signaller error Gatwick Airport	5.2	Network Management / Other
08/09/14	Planning error Tattenham Corner	5.0	Operations

Network Rail has a very useful “Delays Explained” section on its website which helps to clarify some of the jargon – visit:

<http://www.networkrail.co.uk/timetables-and-travel/delays-explained/>

3. Performance Risks

As changes happen on the network, there may be a risk of short-term performance impact to deliver a longer-term overall improvement. Some of the current schemes which may present a risk to performance whilst they are being delivered include:

Scheme	When delivered?
Thameslink Programme, including London Bridge works to increase capacity on the network	Complete by 2018*
Introduction of new trains (377/6 and 377/7) to increase capacity on the network	Complete by Autumn 2014
Arun Valley Resignalling to improve signalling system reliability	April 2015 - September 2016
Uckfield line capacity improvements; platform extensions	TBC
Uckfield line capacity improvements; extra diesel trains	TBC
East Croydon station improvement works	Continues through 2014/2015
Balcombe signalling improvements, improved signalling performance and flexibility	End of 2015
East Sussex signalling improvements, improved signalling performance	Spring 2015

*major works on lower level approaches complete by January 2015

In addition there are a number of smaller-scale planned engineering works refurbishing and upgrading the infrastructure, as well as operator-led programmes of continuous improvement to ensure that reliability of new stock improves.

4. Performance Improvement

As an industry we continually review the factors affecting performance and develop improvement plans to address these issues.

This is a dynamic action plan and new items are added as they are identified through trend analysis and reporting. It may not reflect the lower-level plans, for example improving individual or station performance, which we consider very much part of day to day business. It should also be said that where the action owner is stated, every action is dependent on industry cooperation and close joint working for implementation and effectiveness.

Performance improvements to date

- Network Rail has established a number of dedicated teams across the Southern network to analyse data collected from its track quality trains to predict potential defects on the network even earlier, before they become faults that could lead to delays.
- Network Rail has started to replace 25 year old signalling on both the East Coastway and Arun Valley routes with modern equipment. This will improve the reliability of the system.
- An extra platform has been built at Gatwick Airport station increasing the space available for trains using the station, making the service through there less vulnerable to delays.
- Southern has made changes to its fleet of trains to upgrade certain pieces of equipment to make them more robust, resulting in fewer faults and delays.
- Network Rail has installed conductor rail heating at critical locations, making trains less susceptible to the effects of snow and ice.

What?	How?	When?	Who?
Quicker response to trespass incidents	*Land Sheriffs deployed at strategic locations	Implementing Summer 2014	Network Rail
Tackling the growing trend of fatalities on the railway	Completion of various fatality prevention works e.g. additional fencing at hot spot sites	Identified locations implemented, trend analysis to take forward	Network Rail & Southern
Improve the track condition & increase speed limits	Track renewals at the following locations:		
	Haywards Heath	Autumn 2014	Network Rail
	Norwood Junction	Planned for 2018/19	Network Rail
	Keymer Junction	Autumn/Winter 2014/15	Network Rail
	Selhurst	Planned for 2016/17	Network Rail
	Earlswood South	Winter/Spring 2014/15	Network Rail
	Balcombe Tunnel Junction	Planned for 2018/19	Network Rail
	Purley	Planned for 2016/17	Network Rail
	Battersea Park Junction	Planned for 2016/17	Network Rail
	Pouparts Junction	Planned for 2016/17	Network Rail
	Clapham Junction North	Planned for 2016/17	Network Rail
Improved infrastructure resilience at critical locations	Improved planned maintenance for the most critical infrastructure on our network	Implementation Autumn/ Winter 2014	Network Rail
Early detection of likely faults and failures	Remote Condition Monitoring	Much implementation done, ongoing work	Network Rail
Improved signalling systems	East Sussex Resignalling	Planned for 2015/16	Network Rail
Improved signalling systems	Victoria Resignalling	Planned for 2016/17	Network Rail

*Land Sheriffs are rapid response security guards employed by Network Rail

What?	How?	When?	Who?
Improved signalling systems	Arun Valley Resignalling (phase 2)	April 2015 – September 2016	Network Rail
Reducing impact of emergency power supply isolations	Improved isolation process	Commences 2015	Network Rail
Real time monitoring of train performance	Real-time on-train performance analysis	Trialling now, full fitment and rollout during 2015	Southern
Quicker service recovery following service disruption	Implementation of robust service recovery plans	Throughout 2014/15	Southern
Better contingency planning for engineering overrun	Speeding implementation of an “off the shelf” service reintroduction	Autumn 2014	Southern & Network Rail
Reduce impact of heat on infrastructure and passengers	Better Summer preparation	Summer 2014	Network Rail & Southern
Reduce impact of leaf fall on train performance and punctuality	Better Autumn preparation through more aggressive vegetation cutback and 24/7 seasonal desk in Control	Autumn 2014	Network Rail & Southern
Mitigate the effect of wintry weather as well as storms and flooding	Detailed winter planning and preparation	Winter 2014	Network Rail & Southern

What?	How?	When?	Who?
	Further roll out of conductor rail heating	By Winter 2014	Network Rail
Increased capacity on the West London Line	Longer trains through rollout of 377/7 class on West London Line	Summer 2014	Southern
Improved real time communication at major stations	Radio microphones at stations	Summer 2014	Southern
Improve reliability of class 377 trains	Replacement of Brake Control Units	Summer 2014	Southern
Improve reliability of class 442 trains	Remote Condition Monitoring on 442s enabling us to identify potential failures	Autumn/Winter 2014	Southern
Improve resilience of train dispatch equipment	Upgraded equipment for Driver-only operation	Through 2014/2015	Southern
Better on train communication with drivers	Improved driver/signaller communication equipment	Through 2014/2015	Southern & Network Rail
Quicker rectification of train faults in service	Improved remote fault-fixing on our trains	Continuous improvement	Southern
Fewer crew-related delays and cancellations	Increased driver establishment to strengthen resource	Commenced Summer 2014	Southern

What?	How?	When?	Who?
Reduce the number of crew related delays and cancellations	Improved management of off-track crew	Summer/Autumn 2014	Southern
Reduce delays associated with accessible ramp deployment	Repositioning of assistance ramps at key stations	Autumn/Winter 2014	Southern
Improve the flow of information to staff and passengers	Trial of improved mobile devices to station staff	Autumn 2014	Southern
More efficient and timely train dispatch	Staff shelters at Clapham Junction & Tulse Hill	Autumn/Winter 2014	Southern
Better real time information to staff, helping reduce the impact of disruption	Installation of train monitoring equipment at London Victoria	Winter 2014	Southern & Network Rail
Take steps to reduce root cause delay	Increased functional analysis to understand the drivers of poor performance and formulate remedial plans	Summer 2014	Southern
Reducing delays that occur when a passenger is taken ill	Improved processes when passengers are taken ill	Summer 2014	Southern & London Ambulance Service