NetworkRail

Southern Strategic Plan

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1 Foreword and Executive Summary

1.1 Remembering lost colleagues

At the time of finalising this plan, the region is still mourning the tragic death of Tyler Byrne on 9th February 2021. Tyler was struck by a train whilst working near Surbiton station. He did not come home from work safely. For this we feel a huge collective loss that has overshadowed everything else this year.

Also, during the year, another colleague has tragically died in an accident at the Route Services operated Long Rail Welded facility in Eastleigh on the Wessex Route. These deaths are stark reminders of the risks and dangers of working on the railway. We strive to Put Passengers First, but this must be underpinned by a relentless focus and passion to keep our people and passengers safe. Both accidents are subject to ongoing investigations by the British Transport Police, the Rail Accident Investigation Branch and the Office of Rail and Road. We are offering our full support and cooperation and we will make sure that we understand the full causes and can learn from these terrible incidents.

COVID-19 also claimed the lives of six Southern colleagues in the year. The pandemic has touched us all in many ways, but we are truly saddened by the loss of colleagues to this dreadful disease.

1.2 Executive summary

Southern region's strategic plan is proudly aimed at 'Putting Passengers First'. We are one of five regions within Network Rail and are here to serve passengers and freight users. Our region comprises of Wessex, Sussex and Kent routes as well as Network Rail High Speed and Managed Stations. We are also responsible for managing the major stations of Waterloo, Clapham Junction, London Bridge, Victoria, Charing Cross, Cannon Street and Guildford.

We have over 6700 employees and, before the pandemic, the Southern region was responsible for more than 700 million passenger journeys each year. Whilst passenger numbers have fallen dramatically this year, to as low as 10% during lockdown, we know that when the pandemic passes, a significant number of travellers will return to the railway. Travel patterns and customer requirements will no doubt be affected, but what we do and how we do it will still matter. Passengers and businesses rely upon us to get to work, to transport goods, for getting to the airport to catch a flight or for visiting family and friends. We also affect the lives of those who live close to railway and the millions of people who daily cross over our bridges and level crossings. Our region links major towns and cities including Bournemouth, Southampton, Portsmouth, Brighton, Canterbury, Ashford and Dover. Our region is critical to London's transport south of the Thames and we transport large numbers of commuters to and from London and other employment hubs on some of the busiest and most congested lines in the country. We serve channel routes to Europe, major ports, Gatwick and Southampton airports, and transport leisure travellers to south coast resorts and other tourist destinations. Under normal circumstances, over 7000 passenger and freight services operate on the region every weekday - more than a third of Britain's rail services. We move over 266000 tonnes of freight each week and own and maintain 3300 miles of track, 4986 bridges, 895 level crossings and 7990 signals.

This strategic plan covers the five-year period from April 2019 to March 2024, known as Control Period 6. It builds upon the South East Route Delivery Plan and the Wessex Route Strategic Plan, both first published

in March 2019 and our first regional plan produced in March 2020. Our plan provides an update as at the end of year 2 of the control period.

This plan shows how we are investing £7.2bn to operate, maintain and renew our railway to deliver a safer and reliable service to all passengers and freight users. This will be complemented by additional investment on schemes that will enhance our infrastructure, such as the development of Gatwick Airport station, investment in train depot and stabling facilities and plans to make our stations more accessible for those who find the railway difficult to use. Our new region will champion the development of our network to support the sustainable growth of our local economies. We will work ever more closely with our supply chain to efficiently deliver our ambitious plan and the passenger benefits that this will bring. More details on our investment plans can be found in Section 7 of this document.

Unsurprisingly, the year has been dominated by the effects of the global pandemic, yet against this challenging backdrop, in many areas we have made good progress against our plan. I am extraordinarily proud of how my colleagues in the Southern region have responded to the many challenges of Coronavirus. Two days before national lockdown on the 16th March, my Exec team and I set two strategic objectives – (1) To keep our people and their families safe, and (2) to deliver a railway that meets the needs of our passengers, freight-users and stakeholders. These objectives have been central to our decision making and will remain so as we navigate the second wave and the ultimate recovery.

The direct impact of the pandemic on the Southern region Scorecard is less than one might expect. However, we are very aware that this is in stark contrast to the reality of the wider economic crisis the country faces. We recognise the need to both respond and be seen to respond. In keeping with the wider business, we have put tight controls in place around headcount, we are revisiting our efficiency plans, looking at a variety of modernised methods of working and ensuring that we remain agile to whatever future challenges arise.

Throughout the year we have been establishing our new regional operating model, embracing the challenges and opportunities that devolution brings and building a movement – a movement to Put Passengers First. Our organisational change, which started over 12 months ago, is largely complete. But embedding our new structure, engaging with our delivery framework and slowly changing the culture will all take time and will be our focus over the next 12 months.

As at Period 13 2021 our scorecard forecast performance was 76.9%. Of course, everything is overshadowed by the death of Tyler Byrne and a scorecard cannot ever reflect the emotional loss of a colleague, but the following paragraphs describe how the business has performed, and against the backdrop of tragedy, there has been some successes.

The strong resilience of the pandemic train timetables has helped boost our income from train performance compensation regimes. Since March, train service delivery right across the whole region has been excellent and we've delivered very strong performance with our on-time (moving annual average) at 76.9 %, 11.8 % above target. SWR has seen the biggest improvement compared with any other passenger operator in the country. Our Freight Delivery Metric year to date stands at 95.1 %, 2.6 % above target. Train Service Delivery is explored further in section 5.

One might expect to have seen our delivery volumes drop, but in fact we're very close to target at 98.5%. The bad news though is higher than budgeted unit rates for earthworks and track, which along with COVID-19 upward cost drivers means we are unlikely to achieve our target for renewals FPM this year. In response to this, we've done a deep dive into the track unit rate challenges, with a similar exercise also underway for earthworks and structures. This will inform our plans to mitigate the FPM risk in future years.

Interventions arising from monitoring of new lead indicators, together with the on-going Track Worker Safety programme, will make current performance more robust. The railway is an inherently unsafe environment, but we must be innovative and relentless in our drive to deliver our safety vision.

Our safety plans are provided in Section 4. As outlined earlier, keeping our people safe through the pandemic has been one of our key objectives this year. This has not always been straightforward to balance this with the need to keep the railways running but the business has shown great agility, adopting to new ways of working, on and away from the front line. We have also developed our plans for diversity, training, reward and accommodation as we seek to make Southern a fantastic place to work for everyone. Section 9 provides more details on our people plans.

We have ring fenced £23m to focus on investments for carbon reduction and biodiversity improvements. We've also launched a traction decarbonisation group in response to the national Traction Decarbonisation Network Strategy, prioritising options for electrification on the Uckfield, Marsh Link and North Downs lines with a longer-term vision to be the first diesel-free region.

At our managed stations we have been continuing to focus on passengers' needs. As well as focussing on the basics, we have had to adapt to the pandemic to keep our stations safe and welcoming. The results from the latest Spring 2020 National Rail Passenger Survey (NRPS) show our managed stations scoring achieving their best results ever. Section 6 provides more details on our customers and communities. It's been an incredibly challenging year. We have shown great agility in how we have responded to the pandemic and now must apply the same drive and rigour to embed the learnings from the recent tragedies and to drive forward our safety vision. Our 'Putting Passengers First' movement is gathering more and more momentum, but this will only be considered a success if we also deliver on our safety promises. Next year, we will be judged by a) how well we navigate out of the effects of the pandemic and respond to the tragedies and b) how well we collaborate with train and freight operator partners to encourage people back to rail, to do things more safely, more efficiently together and put rail back at the heart of the communities that we serve.



John Halsall, Managing Director, Southern Region

2 Financials and Outcomes

This document sets out the strategic plan for Network Rail's Southern region and covers the 5-years ending 31st March 2024. This time horizon aligns to our regulatory funding period referred to as control period 6 (CP6). In this document we give an overview of our business performance for year 2 and set out our strategies and plans for future years. In Section 3 we set out the region's operating model and how this will be implemented to deliver our vision and to help us to deliver for our customers and freight users. We then consider the following strategic themes in more detail:

- Safety
- Train Service Delivery
- Passengers, Customers and Stakeholders
- Sustainable Growth
- People
- Efficiency

2.1 Southern region

Southern is one of Network Rail's five regions and comprises of the Wessex, Sussex and Kent routes as well as Network Rail High Speed (NRHS)¹ who maintain and renew high speed route infrastructure on behalf of HS1 Limited. We are also responsible for managing several of the larger stations in London including Waterloo, London Bridge and Victoria. Our vision, 'Putting Passengers First' is aligned to Network Rail's corporate vision, and we believe that the purpose of the region is to serve our routes, who in turn serve our customers and passengers. Correspondingly, our success is inextricably linked to that of our

customers who are the Freight Operating Companies (FOCs) and Train Operating Companies (TOCs) that respectively operate freight and passenger services across our network.



Figure 2-1 Southern Customers

2.2 Summary of plans

Over the course of CP6 we plan to invest £7.2bn operating, maintaining and renewing Southern's rail infrastructure. This includes £3.9bn of capital investment which we expect to be complimented by a further £1.1bn of enhancement funding. Delivering this amount of investment is a huge undertaking but one that is vital if we are to provide the quality of train performance that our customers and passengers expect of us.

Our plans for the control period were predicated on the continued

¹ NRHS has a separate funding mechanism and is not covered by this plan

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expected growth of passengers and train services. This year, that assumption has been unexpectedly and seriously called into question by the advent of the global coronavirus pandemic. For significant parts of this year, passenger numbers have fallen dramatically during the pandemic, as people choose not to travel or have been asked not to do so by lockdown rules. Working from home has become the new normal for many people and, whilst post pandemic we expect passenger numbers to return, there is no common consensus as to how many will return and how long this will take. More long-term home working is inevitable but the affects that this will have on demand and travel patterns are not yet known.

Passengers and freight users will still quite rightly expect better train performance, but will we require the number of services that we originally envisaged by the end of the control period? The emergency timetables introduced during the pandemic, with fewer trains, have proved to be incredibly robust and demonstrate the importance of a resilient timetable to good train performance. If passenger numbers do not revert to pre COVID levels, do we need to restore the fragile high capacity timetables that we were operating before the pandemic or will a less intense timetable satisfy the demand? If this is the case, then this will undoubtedly have an impact on how we maintain, operate and renew the railway and it may be that a different investment approach is more appropriate. If fewer train services are required than originally anticipated, investments schemes and renewals that were planned might not be needed so soon. If this is the case should we be reprioritising work?

All these questions need to be worked through before we can fully understand the implications on our strategic plan. We are aware that the government has reduced the national enhancements budget but the detail and the impact on our region is currently being analysed throughly. Likewise, whilst the emergency spending review has confirmed this and next year's operating, maintenance and renewals funding, at this stage there is no certainty for years 4 and 5 of the control period and so we must remain agile and flexible in our thinking to enable us to adapt when things do become clearer. So, whilst we will continue to plan to deliver our original outputs for year 3, we are mindful that we could be looking at a very different plan when we get a clearer future view of passenger demand and likely funding.

The year has also seen two other major changes to the region. In June, we saw the devolution of the property portfolio to the regions followed by the devolution of national telecoms in September.

The devolution of property saw the transfer of 63 staff, a CP6 opex budget of £16m and a CP6 income budget of £315m. Southern now has responsibility for all property matters in its region. This includes managing and maintaining all work sites and depots but also the management of the commercial estate and all the retail at its managed stations. Retail income has been greatly impacted by COVID. Across the control period, we have written down expected retail income by £180m.

The devolution of the telecoms budget saw the transfer of 14 colleagues, an opex budget of \pounds 4m and a renewals budget of \pounds 116m. A summary of our financials is included in the Summary of financials table at 2.6 and is followed by our long-term scorecard.

2.3 Year 2 business performance

Train performance

In 2020/21 train service delivery has been excellent. Our on-time measure across the region stands at 80.2 per cent, some 14.5 percentage points better than target. Whilst we are very proud to have delivered

such a good service to our passengers through the pandemic, we recognise that the timetables that we have been operating, with fewer train services to reflect the fall in passenger demand, are much more resilient and easier to recover when things do go wrong. However, the period has really highlighted the trade-off between performance and capacity, and we have taken the opportunity to better understand the capabilities of the network and how we can build back a better and more robust timetable with our train operators.

A highlight of collaborative work with our operators is the on-time performance of Southwestern Railway (SWR) on the Wessex route achieving 82.0% per cent as at Period 13. This is in stark contrast to last year when we reported how restoring the performance of SWR was one of the biggest challenges we face. The reduced timetables and lower passenger numbers have undoubtedly played a part in this, but this masks some excellent working between Network Rail and SWR, such as the joint focus to provide access for and remove many long standing speed restrictions which were hampering train performance. We have also delivered for our freight customers with a cancellation rate of 0.58% compared to a target of 0.62%.

Safety

Getting our people and passengers 'Home Safe Every Day' remains a priority. At Period 13 our Fatality Weighted Index was 0.078 and worse than the target of 0.059. The death of our colleague Tyler Byrne on 9th February demonstrates the risks of working on the railway and how we can never take safety for granted but must continually challenge ourselves to improve. Our Track Worker Safety programme, reducing the need for colleagues to go on or near the operational railway, has made good progress this year and we hope that Tyler's tragic death can be a real catalyst for change that people can get behind, challenge the status quo, innovate and embrace new modern and safer ways of working. Our

personal accountability for safety measure is also behind target with speeding offences being the most significant factor. Social distancing measures mean that we require more operational vehicles and over half of all speeding offences have occurred in hire vehicles.

Investment and asset performance

Effective volumes are ahead of target and we expect to finish the year delivering more than planned. COVID meant we had to re-plan Hither Green resignalling commissioning and some bridge works were also re-planned whilst we also encountered some land access issues which delayed some earthwork volumes. Against the backdrop of the pandemic we are proud of how, in collaboration with the supply chain, we have kept the investment programme on track.

Our delivery of enhancements milestone is ahead of target. The project to increase capacity and improve the passenger experience at Gatwick Airport station is in the construction phase whilst the public consultation into the Croydon Area Remodelling project has closed; the proposals were supported by 90 per cent of respondents to the consultation. We have applied new principles for all our major enhancement projects with the objective of identifying opportunities to accelerate work and reduce time and therefore costs.

Our environmental sustainability index is tracking ahead of forecast, driven by lower energy usage. This is largely a result of many of the retail units at our managed stations being closed through the pandemic and has been in part offset by additional diesel consumption as more vehicles are required by our operatives to maintain social distancing. Waste diverted from landfill and recycled is performing ahead of targets. A trial at Victoria for refuse sorting is working well and will be rolled out across our managed stations post pandemic when economic conditions allow. We are on target to achieve our investment milestones for the year.

Finance and efficiency

Despite the challenge of COVID, the portfolio of efficiency initiatives is on track to deliver the target of £120m this year.

Good train service delivery has flowed through into strong receipts under the performance compensation arrangements, although with fewer trains running. However this has been accompanied by a drop in variable track access income. Retail and property income at managed stations has also suffered with the drop in passenger numbers and our full year projections are nearly 80 per cent down on expected levels. We have also incurred substantial costs in mitigating COVID-19. This includes additional PPE and stricter cleaning regimes, additional vehicles and staffing to ensure that tasks can be undertaken safely and signage and posters for passengers at our managed stations.

While delivery of renewals has been strong with few projects deferred due to the pandemic, we have seen increases in the cost of delivering track renewals and, following the very wet winter and spring, there has been a high number of expensive emergency repairs to earthworks. One notable project impact of the pandemic was the loss of Hither Green signalling renewal from Easter. We worked with Southeastern to reinstate the work during a nine-day blockade in July when we also undertook the opportunity to complete extensive platform improvement works. The signalling was successfully commissioned on 3 August and although re-planning at short notice was a great collaborative effort, additional costs were inevitably incurred. As a result of these factors, the region will not meet its Financial Performance Metric target for renewals this year.

People

As well as ensuring that we kept our people safe through the pandemic, the first half of the year was dominated by the Putting Passengers First initiative and establishing our new operating model. The final organisational changes were implemented in September and accompanied by a programme of virtual events exploring how we can work better together for our passenger and freight users and create the Southern Putting Passengers First movement. Employee engagement is strong, but we recognise that there is much more work to do to make the Southern region a truly inclusive employer that reflects the rich diversity of our passengers.

2.4 How we will measure success

Network Rail uses a scorecard approach to set its expected outcomes and to measure success. The long-term scorecard presented at the end of this section is consistent with and derived from the long-term scorecards presented in our original route plans. However, the organisation's strategic priorities and objectives, through the programme to implement our common vision 'Putting Passengers First' have been updated.

We recognise that our purpose is to get people and goods where they need to be and support our country's prosperity. We affect the lives of millions of people every day which can be improved by us performing better. Therefore, as an organisation we are changing and fundamental to this is the establishment of Southern and the other Network Rail regions. Section 2 provides more details on 'Putting Passengers First', our priority areas and our delivery framework that we use to manage our business.

2.5 Summary of financials

		CP6 (£m)						
	Unit of Measure	19/20 (actual)	20/21 (forecast)	21/22 (forecast)	22/23 (forecast)	23/24 (forecast)	CP6 Total	
Total Income	£m	-661	-750	-692	-690	-731	-3,524	
Maintenance	£m	287	332	314	292	295	1,520	
Operations	£m	179	200	201	203	210	993	
Support	£m	133	171	165	148	149	765	
Total MOS	£m	599	702	680	644	654	3,279	
Risk (Region-controlled)	£m	0	0	0	46	102	147	
Risk - GPF	£m							
Total Controllable costs	£m	599	702	680	644	654	3,279	
Non-controllable costs	£m	2	4	3	3	3	14	
Renewals	£m	604	890	771	884	792	3,941	
Total OMR	£m	1,205	1,596	1,454	1,531	1,449	7,235	
Enhancements								
(approved)	£m	194	229	199	203	180	1,005	
Headcount	FTE	6,608	7,041	7,185	7,174	7,165	7,165	
Permanent	FTE	6,445	6,765	6,792	6,773	6,773	6,773	
Agency	FTE	164	282	248	242	231	231	

2.6 Long term scorecard²

ON THE SIDE OF PASSENGERS AND FREIGHT USERS		19/20	20/21	21/22	22/23	23/24	Achievability
On Time	Current Forecast	N/A*	80.2%	72.5%	67.1%	67.1%	
on nine	Last Year's Plan	N/A*	65.7%	N/A*	N/A*	N/A*	
Consistent Region Measure – Performance (CRM-P)	Current Forecast	2.59	1.4	2.59	2.68	2.65	
Consistent Region Measure – Performance (CRM-P)	Last Year's Plan	2.86	2.82	2.76	2.68	2.65	
Freight Delivery Metric (FDM)	Current Forecast	90.5%	95.1%	92.8%	92.8%	92.8%	
Freight Delivery Metric (FDM)	Last Year's Plan	92.8%	92.8%	92.8%	92.8%	92.8%	
	Current Forecast	N/A*	79.0%	80.0%	81.0%	82.0%	
Passenger Satisfaction (NRPS)	Last Year's Plan	N/A*	81.0%	N/A*	N/A*	N/A*	
Catiofaction - Managed Stations	Current Forecast	N/A*	85.3%	86.3%	87.3%	88.3%	
Passenger Satisfaction – Managed Stations	Last Year's Plan	N/A*	85.0%	N/A*	N/A*	N/A*	
	Current Forecast	N/A*	100%	95%	95%	95%	
Passenger Safety – Train Accident Risk Reduction (TARR)	Last Year's Plan	N/A*	90%	90%	90%	90%	
	Current Forecast	N/A*	0.58%	1.02%	1.02%	1.02%	
Freight Cancellations	Last Year's Plan	N/A*	0.62%	N/A*	N/A*	N/A*	
	Current Forecast	N/A*	91.0%	50.0%	50.0%	50.0%	
Kent	Last Year's Plan	N/A*	50.0%	50.0%	50.0%	50.0%	
-	Current Forecast	N/A*	92.0%	50.0%	50.0%	50.0%	
Sussex	Last Year's Plan	N/A*	50.0%	50.0%	50.0%	50.0%	
	Current Forecast	N/A*	91.5%	50.0%	50.0%	50.0%	
Wessex	Last Year's Plan	N/A*	50.0%	50.0%	50.0%	50.0%	
	Current Forecast	N/A*	96.5%	50.0%	50.0%	50.0%	
NRHS	Last Year's Plan	N/A*	50.0%	50.0%	50.0%	50.0%	
	Current Forecast	N/A*	69.0%	50.0%	50.0%	50.0%	
Stations	Last Year's Plan	N/A*	50.0%	50.0%	50.0%	50.0%	
EASY TO ENGAGE WITH, EFFICIENT AND DEPENDABLE PARTNER	East rear striam	19/20	2021	2122	2223	2324	Achievability
	Current Forecast	N/A*	70%	50%	50%	50%	renerability
Complaints Handling	Last Year's Plan	N/A*	50%	50%	50%	50%	
	Current Forecast	£12.1m	-£0m	£0m	£0m	£0m	
Financial Performance Measure (FPM)	Last Year's Plan	£0m	£0m	£0m	£0m	£0m	
	Current Forecast	N/A*	100%	50%	50%	50%	
Enhancement Milestones	Last Year's Plan	N/A*	50%	50%	50%	50%	
PROUD TO WORK FOR NETWORK RAIL		19/20	2021	2122	2223	2324	Achievability
	Current Forecast	N/A*	63.0%	61.0%	62.0%	63.0%	
Employee Engagement	Last Year's Plan	N/A*	59.0%	N/A*	N/A*	N/A*	
	Current Forecast	N/A*	0.078	0.059	0.059	0.058	
Fatalities and Weighted Injuries (FWI)	Last Year's Plan	N/A*	0.059	N/A*	N/A*	N/A*	
	Current Forecast	N/A*	218	162	146	131	
Personal Accountability for Safety	Last Year's Plan	N/A*	162	N/A*	N/A*	N/A*	
	Current Forecast	N/A*	N/A*	50.0%	50.0%	50.0%	
Wellbeing	Last Year's Plan	N/A*	N/A*	N/A*	N/A*	N/A*	
INSTINCTIVE INDUSTRY LEADER		19/20	2021	2122	2223	2324	Achievability
	Current Forecast	N/A*	86%	50%	50%	50%	
Environmental Sustainability Index	Last Year's Plan	N/A*	50%	50%	50%	50%	
	Current Forecast	N/A*	115%	100%	100%	100%	
Effective Volumes	Last Year's Plan	N/A*	100%	100%	100%	100%	
	Current Forecast	8.4%	22.5%	8.4%	8.8%	9.2%	
Composite Reliability Index (CRI)	Last Year's Plan	1.0%	1.4%	1.8%	2.1%	2.5%	
	Current Forecast	4821	4318	4821	4804	4786	
Service Affecting Failures (SAFs)	Last Year's Plan	5144	5123	5103	5083	5062	
L	2250 1001 51 1011	51.1	5125	5105	5005	3002	

² These targets represent our strategic plans. We continue to refine our annual targets to reflect changing circumstances so they are appropriately challenging

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3 Southern Delivery Framework

3.1 Delivery framework 'Better Together Southern'

To deliver our vision and our commitments as set out in our scorecard (see section 2.6), we have created a new delivery framework, *Better Together Southern* (BTS), aligned with Network Rail's six strategic themes. Our six Strategic themes are Safety, Train Service Delivery, Customer and Communities, Sustainable Growth, Efficiency and People. This framework is one component of how we will achieve success, the others being our new operating model and our new culture. Figure 3-3 Delivery Framework Components illustrates these component parts.

3.2 Vision and scorecard

Our new vision means Network Rail Southern Region:

- is on the side of passengers and freight users
- is easy to engage with and an efficient and dependable partner
- has people who are proud to work here
- is instinctively recognised as an industry leader.

These statements are brought to life in the *Network Rail Story* (Figure 3-1 The Network Rail Story). As a region we have taken this a step further and developed our own Southern Story (Figure 3-2 The Southern story) and *case for change* to really engage our people.



Figure 3-1 The Network Rail Story

One hundred and ninety years ago, ordinary people's lives and loves were limited to the spaces and places and people they could see on foot. News travelled as fast as the fastest horse.	And that tran a railway tow commuter to area more th from Winche	
People hardly travelled at all.	In HG Wells'	
Outside London, the South East was largely rural, and a young person from the small farming community of Ashford in Kent would no more consider getting a job in London as he or she would the moon.	station after sounds of the where he retu	
Then, in just 12 years from the opening of the South East's first railway, the Canterbury and Whitstable, the railway arrived at Ashford. Today, thousands of people travel to London in just 37 minutes and they do so working, reading, sleeping, talking, face timing and even	We've seen the when the train through the B name boards	
watching TV.	And during th	
Every day, thousands of trains run across the Southern region on a railway that was largely designed and built more than 100 years ago. London's first railway, from London Bridge to Greenwich, is still carrying trains on the arches built to leap over country lanes, fields	changes to th provided a se We've steppe rebuilding the	

carrying trains on the arches built to leap over country lanes, fields and streams, although thanks to the railway, there's no evidence that a rural community ever existed there. The changes brought by the trains are all around us, from the spread of suburbla, to the transformation of towns such as Ashford.

Figure 3-2 The Southern story

and that transformation continues to this day. From a small market town, to railway town with its own engineworks, to what is now a thriving ommuter town and potentially a hub for Netflix, nothing has changed the irea more than the railway, and that story is replicated across the South, rom Winchester to Wareham.

In HG Wells' War of the Worlds, it's Woking where the hero rushes to the station after the Martian invasion to buy a newspaper and talks about the sounds of the railway as a symbol of "normality" during the crisis, and to where he returns at the end of the book, on patched up tracks.

We've seen that theme through the years, notably the Second World War when the trains kept the country running, running into the heart of London through the Biltz, with blacked out engine cabs and blanked out station name boards.

And during the first weeks of COVID, while people were struggling with the changes to their lives and the world around them, the trains still ran and provided a sense of continuity and normality sadly missing everywhere else. We've stepped up again throughout the pandemic, running trains and rebuilding the railway for the future, keeping the country moving.

Our people did that in the same way the railwaymen and women who came before us saw their roles as more than just a job. We touch the lives of millions every day, in the same way they did and we are building the future in the same way they did. OFFICIAL



Figure 3-3 Delivery Framework Components

3.3 Our operating model

When explaining our operating model (Figure 3-4 Our Operating Model) to our people, we refer to our region as having five routes, Wessex, Sussex, Kent, Network Rail High Speed and Managed Stations. Our stations are our passengers' gateway to our network, which is why we refer to them as our fifth route. These routes are all served and supported by the region's vital service functions and wider Network Rail national services. This operating model effectively puts the parts of the region that are closest to our passengers at the core of our business.



3.4 Our delivery framework

To align our plans for CP6 to our scorecard, we've created a delivery framework, Better Together Southern (BTS), aligned with Network Rail's six strategic themes. As illustrated in Figure 3-5 Delivery framework, where required, we have disaggregated the six themes into 10 components which each have a clear goal. Each theme is sponsored by an Exec member via a Change Board.



Figure 3-5 Delivery framework

3.5 Our culture

The final part of how we will achieve success is our culture, which is made up of service excellence, our values and behaviours, and the way it feels to work in the Southern region.

Service excellence is important because everyone in the region, regardless of their role, is either providing a service to our passengers or internal customers (colleagues) or external customers (suppliers and stakeholders).

Our values are the principles that guide how we act. We empower our people to always be safe, care about the railway, its users and each other, and put teamwork at the heart of all that we do.

Our behaviours are the practical application of these values in day-to-day actions. We will challenge ourselves, be accountable, collaborate and be customer driven as we work to deliver a great service.

Our culture is epitomised and defined by how it feels to work in the region. We want to feel proud of what we're doing and the way we're doing it. We want Southern to feel like a great place to work. Establishing and then embedding this culture will take time.

3.6 Creating a PPF movement

Our Southern Story, our case change, our new operating model and delivery framework and our new culture are about building a movement, a movement to *Put Passengers First*. Our approach to building our movement blends behavioural and social science, and fun. There are various aspects to this which are focussed on engaging our people on the power of leadership and helping us to create momentum for our movement to *Put Passengers First*.

4 Safety

4.1 Context

During these challenging times the Southern region continues to work towards our Safety Vision of everyone home safe and healthy every day, making sure that those using and working on the railway do so with the confidence that their personal health and safety is assured. The region's safety, health and wellbeing strategy is aligned to the RSSB's approach, 'Leading Health and Safety on Britain's Railway' and is based on the RM3³ structure for safety maturity. We want to make sure that everyone feels accountable for their own health and safety and cares for others at all levels of the business. We want our leaders to be energetic, trusting, committed, visible and advocates for a strong safety culture. We expect that every issue or concern raised is properly dealt with in a timely manner therefore generating a learning organisation that continually improves.

Our functional strategy is based on five key themes; leadership, physical environment, systems and processes, assurance and learning. These five themes are our pillars for culture change.

Through a combination of the above our culture will evolve. The Quality, Health, Safety and Environmental team all have plans that build into this framework and are expressed in our delivery framework.

We have established a Regional Health and Safety Board chaired by the Regional Managing Director. This includes senior representatives from the Operations, Maintenance and Asset Management teams. Our Regional Executive examines strategy, processes, initiatives, culture and behaviours to make collective decisions to deal with risks, assurance and to make improvements to eliminate accidents and safety incidents in the business. The Health and Safety Board is accountable for the successful delivery of the Everyone Home Safe [and Healthy] Everyday element of the Change Framework

By the end of CP6, we will change the way we access the railway though our programme to significantly reduce unassisted lookout warning red zone working⁴, increasing protection in line blocks and further implementing Standard 019; the safety standard for people at work on or near the line. The way in which we do our work will change by embedding existing and identifying new technology to allow for remote and automatic inspection of the track.

4.2 The impact of COVID-19

COVID has impacted the way we work, with home and flexible working becoming the new norm. Yet, after the pandemic, we don't expect to see a wholesale move to remote working. Flexibility will be the new mantra, where people will be given more freedom and the support to work flexibly. We recognise that some colleagues miss the commute and cherish their in-person connections whilst others prefer working from home. Therefore, we have built our plans accordingly to reflect this more fluid approach to work.

³ Risk Management Maturity Model (RM3) describes what excellent management capability would look like for key elements of an organisation's health and safety management system

 $^{^4}$ A system where one or more lookouts are positioned to provide enough warning to allow

everyone involved to reach a position of safety at least ten seconds before any train or vehicle arrives at the site of work

As part of our response to COVID, we identified as our number one priority the safety of our people and their families. We were the first Region to implement DSE assessment for those working from home and sent wellbeing leaflets to all our colleagues to help provide support and advice.



Figure 4-1 Resilience wellbeing leaflet sent to all colleagues during COVID lockdown

Despite the downsides, many employees have reported positive experiences of homeworking. We want to continue and expand the positives that have been established as well as addressing the concerns identified. The increase in flexible working allows colleagues to spend more time with family and less time commuting – providing a better work-life balance. This in turn can help morale and productivity through this challenging period and contribute to staff retention and engagement.

4.3 Overview

Our regional strategy provides clear direction on where resources should be targeted to greatest effect. We will continue to better understand our risks and better target our resources and people's attention to these accordingly. Through our PPF organisation we have placed more HSE resources directly into the routes and created a regional support team to provide investigation, analysis, assurance and audit support.

Our overarching strategy for safety, health, wellbeing and environment is:

- Further development of our inclusive safety (HSE) programme with clear accountabilities built upon a foundation of trust. Focus on building trust with our people, creating openness in safety, promoting reporting of incidents, accidents and close calls. This allows us to learn and act, thus making our business a safer place.
- Improving our learning culture developed by driving safety improvement through analysis and focused intervention planning. With focus on risk detection supported by analysis, this allows us to better target our resources. We are aware of our risk profile and collaborative in the development of countermeasures whilst contributing to, and being receptive of, wider shared learning.

We continue to use root cause analysis of all learning events to understand underlying factors. In addition, we have used industry best practice, RM3. Through this analysis, and working with the Office of Rail and Road (ORR), TOCs / FOCs and our trade union representatives, we have identified five key themes which together address the underlying causes of SHE incidents and accidents, these being:

- Leadership Our leaders are safe, caring role models who exhibit strong wellbeing and safety behaviours
- Physical environment Providing a tidy site and the right tools, materials and equipment is key. We provide a safe environment for all colleagues working and anyone using our railway.
- Systems and processes We provide our colleagues with simple, clear systems and processes to enable them to deliver their work and manage critical tasks

- Assurance Our staff know they have support and it's expected they follow processes. Our assurance team is now established for L1 and 2. We will use evidence-based assurance techniques that provide confidence that processes are followed, and our risks are managed.
- Learning Continuous improvement and sharing of best practice and lessons learnt. We will use all available sources of information to improve the effectiveness of our controls and prevent reoccurrence.

Each theme has a draft improvement plan, addressing the 'why, what and how'.



Figure 4-2 Southern region safety, health and environment transformation aligned to HSG65

Whilst keeping our people safe through the pandemic has been a major focus, we recognise the most significant hazard our colleagues face continues to be that from moving trains and electricity. Our investment programme targets these high-risk areas. Through improved planning and use of technological solutions we shall improve track worker safety, through either eliminating the need to access the track (e.g. Plain Line Pattern Recognition and Eddy Current) or reduce exposure of workers to third rail risk, such as Negative Short-Circuiting Devices (NSCDs). These will be supported by the provision and use of additional protection and warning devices.

We recognise that our culture can have as big an influence on safety performance. We run an integrated Safe Performance Development Programme across the Region where BeST [Behavioural Safety Training] and Section Capability Development align together. We have used an independent behavioural specialist to review BeST from different lens and incorporated CBT (cognitive behaviour training) feedback. Additionally, our behavioural specialists have also reviewed investigations to understand common causes.

We have aligned our safety coaches with each Delivery Unit to ensure they are able to develop relationships with frontline colleagues to understand underlying issues or causes. These coaches also improve assurance and learning from audits and inspections.

Our vision of Everyone Home Safe and Healthy Every Day is as applicable to our customers, passengers and neighbours, as it is to our workforce. We are reducing level crossing risk through targeted upgrades, enhancements and closures and, in addition, we are working collaboratively with our Operators to reduce the risk of Signals Passed at Danger (SPADs). We have health and safety action plans in place for each of our managed stations and have developed a suite of leading and lagging indicators to support our progress.

4.4 Workforce safety

The regional workforce safety strategy identifies and seeks to reduce, exposure to the key hazards facing the workforce, such as interfaces with train, electricity, plant and working environment. However, we recognise that our culture has an equivalent influence on safety outcomes.

We continue to invest in programmes which engage with our colleagues to influence behaviours, supporting a safety culture improvement. Our programme focuses on engaging individuals to take personal responsibility for their health and safety. We have engaged with independent culture experts to understand why decisions are taken and where the intervention points were for significant events. This allows us to review and adjust our processes to incorporate these intervention points, as well as supporting those involved with behavioural action plans. These have highlighted that many of our processes require colleagues to "opt – in" to be compliant rather than the default being compliant. We have commenced mapping our processes to deliver this and have successfully delivered compliance to CDM 2015 (Construction, Design and Maintenance legislation 2015) in maintenance as an example.

As outlined above, we deliver two behavioural safety courses across Region, BeST and Section Capability Development, both aligning together to form an integrated Safe Performance Development Programme.

Our front-line teams are supported by independent site safety coaches aligned to every delivery unit who use nudge theory to support improvement and the desire to reach a higher level of personal performance. This alignment allows trust to be developed and root cause of issues be identified and resolved.



Figure 4-3 Section Capability Development coaching framework

We recognise that our investigations process often:

- Stops investigating once someone has been identified as having been in some way 'at fault'. Re-training the individual(s) found to be at fault is treated as adequate learning.
- Can fail to consider the wider organisational and systemic factors that created the situation, and which, if addressed, would lead to more effective and enduring change.
- Tends to view incidents with hindsight and to view the way people acted or the decisions they made considering the way events unfolded, rather than in the context of the information and the situation facing the individuals at the time.
- Can fail to adequately identify or understand the psychological motivations or incentives behind the ways people behave and the decisions they make. This includes assuming that trained and competent people will always make rational and informed decisions.
- Can fail to adequately capture and understand the situational and contextual factors associated with adverse events, and to

identify future situations with similar characteristics where learning from the incident needs to be applied.

Our investigation framework demonstrates how we plan to address these issues and, where gaps are identified, we are updating processes via our quality manual and using our level 2 assurance (safety coaches and manager self-assurance auditors) to make sure that the change has been embedded. Our dedicated investigation team is supported by our investigation system (IRIS) which has over 600 trained users in the region.



Figure 4-4 Investigation model

We have established learning dashboards, which provide data on underlying causes and behavioural insights, as well as better visibility of open investigation actions. This information is being used to understand the trends, undertake remedial actions and act on emerging risks. One key theme of investigations, particularly in Kent route, has been the increase in the number of electrical safety events. Whilst there were actions from each individual investigation, this has also prompted the formation of an electrical safety working group to deliver a coordinated programme of work across the Region. Another key theme from many near miss events in the region has been the quality of cyclical safe system of work packs, and the Trackworker Safety programme is working to improve by aligning these tasks to track access. Additionally, Delivery Units are reviewing all cyclical packs to ensure that they are of a suitable quality.

We are investing over £45m into our track worker safety programme. Our vision is to provide the safest environment for our track workers. We shall do this through reducing the need to go on track, using the safest method for all remaining work and by making it easier and safer to plan work into line blockages and possessions.

We will achieve this in two ways:

- Use of technology such as Intelligent Infrastructure, Remote Condition Monitoring, extended Risk Based Maintenance and train-borne monitoring (PLPR⁵ and Eddy Current). The implementation of these has so far eliminated 5,400 hours of work where people would have needed to go trackside. Additionally, we have installed over 250n T-COD (Track Circuit Operated Device), which provide secondary line blockage protection.
- Planning We are reviewing work banks to ensure there is enough safe access and to ensure activities are planned into possessions or protected line blockages. The programme aspires to deliver 0% unassisted lookout working and 100% of all line

⁵ Plain line pattern recognition

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blockages utilising secondary protection.

We cannot rely solely on improvements to planning and use of technology. We need to support our colleagues to want to make the changes. Therefore, we have made a significant investment in engaging with front line colleagues to explain the rationale and how it will impact them. Our progress has meant that we have made a 27% reduction in unassisted lookout working over the past 12 months and additional protection levels have increased from 8% in April 2020 to 16% in September 2020. Near miss frequency across the region has also significantly improved in the first 5 periods of 2020 from 643,000 hours between near misses and now⁶ sits at 1.1 million hours between near misses.



Figure 4-5 TWS drop-in session with Victoria Track

The Region has substantial funding for the installation of NSCDs and other electrical safety equipment in the Southern region. This will largely

⁶ October 2020

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remove the need for the workforce to fit short circuiting straps when taking electrical isolations. Current plans show that by the end of CP6 there will be full route coverage on the traction feeders' locations in Wessex, 80% in Sussex and 60% in Kent. However, our vision remains to fit NSCDs to the entire region by the end of the control period and we are continuing to seek opportunities to accelerate funding and delivery. Our CP7 aspirations is to rollout further devices from the NSCD toolkit that provide opportunities for more flexible isolations and reduce the need to manually operate hook switches.

To maximise the benefit of NSCDs we will develop, trial and secure approval for a remote securing process using the new SCADA system that removes the need for individuals to visit local control panels to set up isolations.

Together these plans will deliver improved compliance with the Electricity at Work Regulations, reduce the risk to our workforce and deliver efficiencies through improved working time in possessions and repeatable possession plans and isolations.

We continue to retain healthy Close Call reporting rates, managing to review, action and feedback upon 90.5% of all Calls raised within 90 days. We recognise that our close call system has gaps and we have commenced trials with a new close call system which is incorporated into our IRIS system. This means that, as part of IRIS we have linked our inspections, investigations and now close calls to provide a holistic view of leading and lagging incident measures. We aspire to have all incidents reported through IRIS as a replacement to the existing SMIS+. Initial feedback has been positive and increased close calls raised.

4.5 Public and passenger safety

We have £35m dedicated to reducing level crossing risk with level crossing FWI expected to reduce by 13% across Sussex and Kent and 25% across Wessex by the end of CP6. We have closed key crossings such as Shornemead in Kent and Darkies in Wessex. Over the coming year we expect to build on this and secure key level crossing closures at; Angerstein, Glebe Way and Pilgrims Way footpath crossings on Kent Route; Tidemills, Toddington AHB and Woodside on Sussex; and the installation of a new bridge at Shere Heath bridleway on Wessex Route.

Where we can't close crossings, we will seek to introduce technology to improve safety. In the last year Wessex Route installed miniature stop lights (MSLs) at two crossings including a trial of a new 'interfaced overlay' system at Smiths user worked crossing on Wessex. In Kent and Sussex red light safety cameras were installed at 33 automatic half barrier crossings to deter misuse and improve enforcement. Over the coming year MSLs will be installed at Dibleys FP crossing on Kent and the MSL delivery programme will increase significantly from the second half of 2021 onwards. Wessex Route will also install red light safety cameras at 17 level crossings over the next year. It is forecast that these schemes will reduce risk by 4% across the Region over the next 12 months.

We are already building our plans for CP7. We will focus on closing and improving passive crossings, particularly those that provide access to schools and amenities. We will also replace whistle boards with better train warning technology and provide technology at crossings with telephones in long signal sections where it is difficult for Signallers to pinpoint train location. We will also continue to upgrade automatic half barrier crossings.



Figure 4-6 Interfaced Overlay at Smiths crossing (Wessex)

We are conscious of the importance of crossings for communities and have shared our five-year plan for potential closure sites with local councils, so we can work together to improve safety whilst being mindful of local crossing user needs. We continue to collaborate closely with industry partners such as the British Transport Police to use joint intelligence to prioritise interventions (reduction / enforcement) at high risk locations. This includes using our Community Safety teams to engage with local councils, schools and stakeholders in high risk areas to increase level crossing risk awareness focusing particularly on those of a primary school age.

The SPAD rate (Trains passing a signal at danger) in year two is better and the MAA is now showing improving performance again, but this reduction may, in part, be a consequence of reduced services on the network as a result of COVID-19 pandemic restrictions. In response to year one increases in SPAD numbers, and hence risk, an independent review of SPAD management was commissioned. This in-depth study by a leading industry expert has identified several areas where improvements can be made:

- Over half the SPADs that take place occur at the beginning or end of a trains journey, indicating non-technical skills enhancements are needed to support drivers during start of journey preparation, and avoiding end of journey pre-occupations.
- Failing to check signals by becoming distracted and losing focus on the task is by far the single biggest cause of passing a signal at danger, and an inattention model is being introduced to categorise the different forms of inattention and better understand the human error modes at play.
- As train service numbers return to normal, red signal exposure rates are likely to increase again, and so extensive use will be made of the recently released 'red aspect approach to signal' (RAATS) tool to help identify any emerging problem locations.

SPADs are a joint risk, and we continue to work collaboratively with our train operating company (TOC) partners; to understand underlying causes better and target mitigations at a system level to facilitate sustained year on year reductions in SPAD risk. Improvements in investigations, both in proportionality and rigour, will support this aim with recommendations aligned to the root causes of both SPADs and other precursor events.

4.6 Occupational health and wellbeing

We have launched our vision of 'Everyone home safe and healthy everyday' within the Putting the Passenger First Delivery Framework. As well as addressing physical health, we will continue to support our employees' mental fitness through these challenging times. The changing working environment over the last year, due to COVID, has brought many challenges to our workforce, rapidly changing working practices and environments. We have had to adopt our health surveillance programmes for Hand Arm Vibration (HAVS), musculoskeletal disorders (MSDs) and noise and respiratory illness to continue to support our employees and comply with health surveillance legislation. These health assessments have continued successfully through telephone-based health questionnaires and where an employee has been identified as high risk 'face to face' intervention has been delivered and the necessary mitigation measures put in place.

The Southern Region led the way in supporting our employees working from home during the early days of the COVID crisis. Our 'Working from Home and Thriving' leaflet was well received and provided health and wellbeing hints and tips to encourage constructive habits and resilient behaviours. In addition, we provided Display Screen Equipment (DSE) assessments to all home workers and, where required, provided additional ergonomic equipment and support.

We have continued to operate the Victoria and Basingstoke health clinics but unfortunately, our targets for workforce health and wellbeing medicals through these clinics have been hindered due to restrictions brought about by COVID. However, we have continued our HAVS surveillance programme alongside other workplace exposure surveillance via the telephone-based assessments.

Going forward, we will be launching our Southern Region 'Heads Up' mental health campaign which will kick off with our Regional Managing Director's pledge to mental health at work. Our Peer Support Network will be developed to help colleagues in need; help raise awareness around wellbeing within specific work areas; assist with the implementation of the Health and Wellbeing strategy; and signpost employees to available support. This network will be coupled with effective line manager training in mental health support; enabling them to better support their teams through mental health difficulties.



Figure 4-7 'Heads Up' campaign

We will be participating in the MIND Wellbeing Index for the 3rd year in Wessex, the first across the Region and we seek to build upon the Bronze level received by Wessex in 2020. The Index is a benchmark of best practice and policy, launching on Time to Talk day, Thursday the 4th of February 2021. We will receive a report in June 2021 outlining progressing against the six key topic areas:

- 1. Culture and engagement
- 2. COVID
- 3. People Management
- 4. Knowledge and Skills
- 5. Support
- 6. Wellbeing Initiatives

Within the Region we have strengthened our governance framework for Health and Wellbeing. The Health and Wellbeing Board has been established between senior representatives in the operations, maintenance and asset management teams. This Board examines strategy, processes, initiatives, culture and behaviours to make collective decisions to deal with occupational health compliance, mental wellbeing, risks, assurance and make improvements to improve the health and wellbeing in the region, routes and stations.

Supporting the RSSB mental wellbeing working group we have created a Southern Region working group with all TOC and RSSB leads represented. Here best practice and collaborative campaigns are discussed and agreed.

4.7 Focus on Sussex

Since 2017 over one quarter of the lost time injuries in Sussex have been because of manual handling. We are therefore focused on eliminating manual handling injuries at source by using equipment such as stair climbers and motorised trolleys.

Our focus is on improving our workforce, public and passenger health and safety. Our key areas of focus include supporting the track worker safety programme and reducing unassisted lookout working and understanding and improving fatigue of our workforce.

Working with the Regional Investigation team we want to improve the actions and recommendations that result from investigations and ensure that these are embedded into our processes so they cannot be repeated.

Breaches of driving standards, such as speeding, are showing an upward trend and we are working in collaboration with the delivery units to analyse the data. We plan to use the Driver Awareness training developed in Wessex and implement this across the route to improve driver awareness.

4.8 Focus on Kent

The focus in Kent is on key areas such as workforce health, safety and wellbeing, operational risk, public and passenger safety and sustainability. Key initiatives to promote workforce health, safety and wellbeing on Kent route will include:

- Reducing overall exposure to staff alongside the live conductor rail
- Behavioural Safety Training (BeST) programme helping staff to adopt techniques such as 'risk-based commentary⁷' to raise situational awareness
- The introduction of motorised trolleys and 'stair climber' equipment to help transport tools and materials from access points to worksites - to reduce manual handling risks
- Continued upgrade of hand-held tools to battery powered options in order to reduce equipment weight and vibration in order to reduce manual handling and HAVS risk to staff

In terms of operational risk and community safety, Kent Route will focus on:

- Enhanced safety critical communications monitoring of frontline staff
- Greater use of additional protection and reducing open line working
- Collaborative working with train operating companies to develop an even stronger safety culture on the Route and to develop and deliver ambitious Joint Safety Improvement Plans
- To drive down level crossing risk (measured in FWI) and to reduce

near miss and misuse precursor events. This includes delivery of the level crossing strategy and implementation of misuse reduction plans including collaborative working with the BTP

• Increased engagement with local community using Margate Life Educational Centre which opened Winter 2020. COVID has meant that use of this facility has been limited.

In addition to the above initiatives, Kent Route shall build on the introduction of the new Investigation Team by seeking to carry out preemptive investigations and to deliver sustainable vegetation management in line with the review carried out by John Varley in 2018.

4.9 Focus on Wessex

Wessex route has an HSE strategy aligned with national, regional and ORR HSE strategy. We have established an HSE Executive Board to facilitate strategically focussed dialogue to enable the Route Director and executive team to lead and discharge health, wellbeing, safety and environmental accountabilities.

Areas for improvement and associated activities have been identified based on analysis of accidents, incidents, assessment of underlying causes and trends, evidence and intelligence from stakeholder discussion, and areas of non-compliance to legislation.

• A comprehensive programme of human factor related psychological profiling of some roles to enhance recruitment, training and continual professional development. Continual improvement in Safety Critical Communications through increased use of training, assessment and assurance delivered in part by the increased use of voice recording technology and interactive IT solution trial.

⁷ Individuals talking out loud, sharing the **risks** seen

- Provision of a safe working environment, safe access and egress will be improved through the provision of new track access locations commensurate with operational needs
- Engagement with a provider of professional investigators to mentor our L1 and L2 investigators during the evidence gathering and analysis aspects of the investigation process.

Working alongside Human Resources and senior managers we will help to build a resilient workforce. We will create support programmes for health and wellbeing based on the promotion of good mental, physical, dietary and spiritual principles, including education, leadership and joint venture multi-organisational opportunities.

Our in-house facility in Basingstoke can deliver extended medical support and health assessments for the wide range of hazards faced by our workforce including manual handling, hazardous substance exposure, HAVs and noise related risks. This is supported by increased identification of occupational health risk, enhanced monitoring and implementation of controls necessary to minimise exposure of the workforce.

Community safety is an important part of our intention to provide an outstanding educational programme for the young persons and youths of our community. The impact of COVID-19 has reduced the ability to engage in face to face with schools, colleges and similar young person's organisations. We are moving to a digital platform to access the intended audience and maintain momentum to promote the risks associated with the live operational railway and the third rail, to deter the option of the railways as an alternative playground of choice.

4.10 Focus on Capital Delivery

Capital Delivery adopts the principle of safety in the line. This means accountability for the implementation of the NR safety and environmental management system sits within project and line management. There is a clear 'chain of command' which provides a formal hierarchy of authority to enable the effective cascade of communications, and discharge of accountability and responsibility within the organisation for safety, sustainability and business decisions. The Safety, Quality and Sustainable Development team provide competent leadership, guidance and support to all aspects of project management to deliver legal compliance and improve Safety and Sustainability performance for the benefit of our passengers.

4.11 Focus on Stations

We have recruited dedicated safety and quality personnel to support the team and passengers and public. The Region holds three of the four busiest stations in the country, with annual passenger journeys of circa 169 million through these three stations. COVID has impacted passenger numbers and how we protect our people and the public. We recognise that overtime, passenger journeys will return to normal and ultimately increase so we are continuing to invest in training and technology for congestion and crowding to help us understand and manage crowding more efficiently.

To deliver excellent customer service and maintain a safe and sustainable station environment for passengers, we plan to:

- Continue to invest in the training of our people to ensure they are equipped with the essential skills and enabling conditions to safely deliver services to our passengers. The areas of focus being investigations, crowd control and conflict management
- Work with System Operator colleagues to understand the future capacity constraints of our stations and subsequently influence

infrastructure and longer-term station improvements

- Work collaboratively with London Underground to implement joint congestion plans to improve the overall customer experience for all passengers
- Trial mobile tracking software at Clapham Junction to better understand passenger flows across the station. This data will be used to influence operational decision-making including how we effectively inform passengers during disruption
- Create a Passenger Safety Steering group to review the safety performance of all stations, review best practise and ensure safety initiatives are being delivered and benefit realised
- Improve air quality at our stations and collaborate with our TOC partners to implement idling policies on diesel stock where practical
- Improve how we deliver passenger information to enable informed decision making, which will reduce crowding at times of disruption and put passengers in control of their journeys
- Continue to make short term infrastructure improvements aimed at alleviating congestion, improving passenger circulation and reducing safety risk

The following chart illustrates the percentage and type of passenger accidents that we see at our stations, followed by an outline of our action plans:



Figure 4-8 Analysis of accidents at Network Rail managed stations

4.11.1 Workforce, public and passenger safety

We continue to see a rise in colleagues assaulted by those under the influence of drugs or alcohol or those who are asking passengers for money. At Charing Cross we have employed an outreach worker to help find people temporary accommodation. Whilst this has had an impact, it is a constant requirement.

To support our workforce further we have provided training for all our teams on how to have positive conversation with homeless people to get good outcomes when moving them on and how to make referrals to charities so they can get the support they need. We have also undertaken trials of body worn cameras at London Bridge and Charing Cross and are mandating these at all our managed station.

We are investing in conflict resolution and de-escalation training across our customer facing teams and will incorporate this with dynamic risk assessment training to ensure our workforce are equipped to respond accordingly. This is supported by increased investment in Land Sheriff teams and working with local business improvement districts.

We are working with our facility providers to undertake slip resistance testing and improvement in cleaning chemicals to reduce slips, trips or falls on station platforms and concourses. There have been 28 slips /trips or falls in the last 12-months allocated to Platform Train Interface (PTI). We control this risk jointly with TOCs. The establishment of the passenger safety steering group will ensure that PTI remains a focus and proposed actions are undertaken. This will be supported by the creation of the PTI working group which brings Operators and Asset Management together discussing and prioritising PTI interventions. All stations will have standardised PTI assessments with TOC and Network Rail sign off on actions; a training programme will be developed for station managers on PTI compliance to standards; and a risk register and heat map will be developed for high risk platforms.

We have invested £2.5m at Victoria replacing existing glazing to reduce water leaks across the station concourse. As a result of these and better cleaning regimes, slip, trips and fall accidents have declined. We are working with Asset teams to continue these improvements by investing in our guttering and drains.

We have increased the number of close calls raise by our teams, through the trial integration of close calls with inspections via IRIS. This integration creates the opportunity for a holistic view of station safety as we have the capability to link a close call to an accident or inspection. We plan to use this information to start taking preventative measures to improve potential hot spot areas.



Figure 4-9 Station close call categorisation

We will ensure that all station accidents and incidents are reported and investigated, with lessons learnt cascaded across the business function.

There have been several high-profile incidents across stations involving external contractors, which highlighted the need to improve how works are conducted across Network Rail managed stations. We work with our contractors and subcontractors to improve our safety standards, to reduce the risk to contractors, employees and passengers. We achieve this through an improved inspection, on-boarding and assessment process. We will also partner with our retail tenants on a joint framework that aligns with our efforts and commitment, to control these risks at areas of interface.

We continue to focus on escalator safety with 30 accidents over the past 12 months. While COVID has impacted passenger numbers, we anticipate an increase in the number of accidents occurring on escalators because of changes in passenger behaviour and the COVID protocols at our station lifts and escalators. To ensure we can proactively act under any circumstances, we are channelling additional resources to step-up our "safety nudging" efforts through verbal warnings and continuous

monitoring of passenger circulation and behaviours at our station lifts and escalators. We continue to place Customer Service Assistants at accident hotspots at key times of the day to encourage passengers to use lifts (with luggage, etc.) and ensure that the hygiene condition in our lifts are of high standard, to make their use attractive to passengers.

The health and wellbeing of our colleagues, passengers and public is fundamental to the service we provide. Partly in response to the pandemic, we have enhanced the PPE we provide to colleagues along with personal issue radios to all station frontline teams so that no-one needs to share a radio. At London Bridge we have created safe zones using tensa barriers to allow staff to stand on the concourse and maintain separation with passengers. We have established measures to allow us to continue to support passenger assistance for those visually and mobility impaired passengers.

We continue to work closely with our Operators to reduce noise and diesel emissions from idling trains and taxi ranks. Where possible we have relocated taxi ranks so that they are no longer in enclosed areas.

4.11.2 Security

The purpose of the Southern Region Security Strategy is to set out how we will deliver better security to protect passengers, the public and staff from harm, whilst delivering the essential service of enabling the safe, secure movement of passengers and freight.

The strategy, which is aligned to our vision, security objectives and strategic business themes will focus on the key principles of Protective Security Measures, Security Governance, Risk Assessment, Operational Requirements and Security Culture. This strategy will provide a clear roadmap of what we want to achieve and how we are going to deliver it.



Figure 4-10 Victoria station support

The aim within the region is to embed a security culture to the same level to which we currently view safety.

This strategy will transform our approach to security by:

- Defining and communicating a clear security vision.
- Demonstrating how the vision and strategy aligns to the wider corporate strategy of Putting Passengers First.
- Defining clear security roles, responsibilities and processes.
- Understanding and systematically documenting the security risks and threats within the Region.
- Identifying the unacceptable risks and putting actions in place to mitigate them.
- Embedding a security culture of continuous improvement based

on lessons learnt.

• Empowering security leadership and engagement with stakeholders to ensure the vision is communicated through the business effectively.

Accompanying this security strategy will be a live framework and milestone plan which will provide a more detailed level focus on the strategy delivery plan.

Current key performance indicators and measurement process include:

- Addressing performance in relation to compliance with the regulatory requirements:
- Mandatory training
- Station covert testing
- DfT inspection requirements met
- DfT identified serious deficiencies
- Open/overdue DfT inspection actions
- Trespass/Suicide incidents, delays and costs
- Assaults staff and passenger
- Cable theft incidents, delays and costs





Future key performance indicators and measurement process will include:

- Checking the security processes in place and assessing the effectiveness of security processes
- Security reviews including during the introduction and deployment of new technologies, change or implementation of procedures, or in situations of structural change, or to explore an increase in incidents or security reports
- Security audits which focus on the effectiveness of the management system aligned to business objectives
- Examination of elements or procedures of a specific operation, such as problem areas or bottlenecks
- Internal security investigations of security incidents
- Monitoring of security incident reporting.

4.12 Quality, risk, and assurance (QRA) and business improvement

One of the ways that we review our safety practices is through our QRA systems processes. This has wider business benefits outside of our safety management and is applied to all our key business processes. We use Network Rail's GRAI framework (Governance, Risk, Assurance and Improvement) to underpin the quality of our activities and to drive improvement.

4.12.1 Governance

The region has made strong progress on developing a "Quality Manual", documenting for the first time, all c.350 high-level processes operating in the Region. The baseline processes established in Year 2 will be embedded into the Region through Year 3, with an IT solution developed to make those processes accessible to all staff and ultimately form the basis of an operating Quality Management System.

4.12.2 Risk

There are well established risk processes aligned to the national framework across the Southern region, however the level of quality and "hands-on" risk management varies by function. Through Year 2 we have implemented operational risk heat maps throughout the business (for example at individual Maintenance Engineer level). For Year 3 a key improvement required is to implement and embed a new system to enhance the management of risk, enabling more effective identification of risk-insights and tracking of corresponding actions.

4.12.3 Assurance

The region's ambition is to move away from 'self-assurance' type activities towards an increasing amount of 'on-site' coaching style assurance. This provides a more accurate reflection of the strength of business operations and provides staff with clear guidance on how they

should be safely undertaking tasks. An example of this is our on-site safety coaches who attend worksites to coach staff on safety compliance and provide a platform for improvement feedback. In Year 3 we will also be moving into Phase 2 of the Management Self Assurance (MSA) Coaching programme, which replaces the previous periodic "box-tick" self-assurance process, with a revised question set better reflecting the Regional risks. Finally, in Year 3 the Regional Integrated Assurance Plan (IAP) will come into full effect. Responsibility for developing and delivering the Functional Audit Plan (FAP) audits will sit with the Region, and additional risk-based pre-audits will be fully programmed into our assurance framework.

4.12.4 Improvement

The Southern Region are actively involved in the process of establishing a baseline for Governance, Risk and Assurance, which once in place (target is March 22) we will then start to undertake continuous improvement. We have however already undertaken some big improvements in the Control Period to help deliver GRAI, including the Quality Improvement Programme (QIP) and the launch of the IRIS system. QIP has been running since October 2018, and the original riskbased Top 50 priority processes have been reviewed, re-designed and housed in our Regional Quality Manual. As such in Year 3 QIP will evolve into a more reactionary mechanism to tackle any new or evolving risk area. IRIS continues to reach further and further into Network Rail, with a full roll-out programme now led Centrally via the Technical Authority. In Year 3, in collaboration with the TA, our plan is to undertake all of our significant assurance checks on IRIS and transition our Close Calls management onto the system so that we can more effectively understand hot-spot issues from a joined up suite of data.

A case study, using our "Coached manager self-assurance process" is included below demonstrating how the different elements of GRAI are

coming together to improve our business and ultimately help us deliver more effectively for our passengers.



Figure 4-12 Coached manager self-assurance process

5 Train Service Delivery

5.1 Context

Our vision of Putting Passengers First guides our approach to managing our train service delivery for passengers and freight users across the Southern region. This relies on a robust performance strategy that encompasses not only how the infrastructure is maintained, but how we manage the network on a day to day basis and through times of disruption, dealing with incidents promptly and efficiently to minimise delay.

In year 2 of CP6, the onset of the COVID-19 pandemic has resulted in a sharp fall in passenger numbers. At the peak of the first lockdown, the average footfall was only 6% of the same time the previous year (a reduction of 94%). During the third lockdown, the average footfall has been 30% compared to the same time in the previous year. So, despite passenger numbers having recovered as the year continued, some uncertainty around long term recovery remains.

Despite the decrease in passenger numbers, our region has continued to work closely and support our lead operators to ensure the provision of a punctual and reliable train service. This has required a dynamic approach to timetables and train service levels so we can accommodate for the changes in demand. (Figure 5-2 Train count across Southern Region lead operators)

In year 2, we have seen overall improvements in all areas of our performance, predominantly due to reductions in the levels of reactionary delay, which is directly linked to train service levels.

Despite this we continue to be absolutely focused and ambitious to drive

performance improvement for passengers and freight users, to ensure that these performance improvements carry on beyond the pandemic. Through our existing plans and governance, we have responded at pace to changes and emerging risks.



Figure 5-1 Southern Region Passenger Footfall at Stations

The Southern region is an exceptionally complex network, and sustainable good on-time performance can only be achieved with strong collaboration between Network Rail and train and freight operators. We are proud of the strong relationships with our train operators across Kent, Sussex, and Wessex routes. We have joint performance and delivery teams in place supported by a regional performance and intelligence team working to deliver one industry plan. This has led the region to more innovative solutions in resolving recurring problems and improved joint management of our network.

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Figure 5-2 Train count across Southern Region lead operators

5.1.1 Our train performance strategy

Consistently delivering strong train performance for our passengers requires all parts of the 'railway system' to work together. We recognise the interdependencies of a dynamic rail network and plan to ensure our actions are not just tactical but form part of a coherent strategy.

Our Performance Strategy centres around a 'Figure 5-4 Plan-Do-Review Performance Approach', building the closest possible relationships with GTR, Southeastern, South Western Railway (SWR), Arriva Rail London (ARL), our freight operator customers and other operators who use our network.



Figure 5-3 Train Performance Strategy



Figure 5-4 Plan-Do-Review Performance Approach

The performance graphs in this section plot historical PPM to present the long-term performance trend and to allow inter-operator comparability. However, for GTR and Southeastern we now use On-Time as the primary

measure of punctuality recognising that on a high frequency railway a 5minute PPM tolerance is not acceptable to our passengers. For SWR PPM remains the primary measure of performance as this is reflected in their franchise agreement with DfT. For ARL, the primary measure of punctuality is T-3.

5.2 CP6 – Year 1

5.2.1 Kent overview

This has been a year of significant investment to modernise the railways in Kent and provide fixes to issues that have hampered performance in the past. Current performance delivery for Southeastern, the main train operator on the route, is shown in (Figure 5-5 Current performance delivery - Southeastern)

Modernisation of signalling systems in the Angerstein and Hither Green areas combined with asset replacement as part of the works has and will continue to deliver a more reliable service to passengers for many years to come. Added to these two huge resignalling programmes has been investment in our structures, undertaking a weeklong blockade at Barnehurst to remove the threat of landslips along the Bexleyheath line that had become a regular occurrence blighting the journeys of many thousands of passengers.

While we are proud of what we have successfully delivered as part of that programme of modernisation, we also recognise that there remain significant challenges – particularly in and around the Lewisham area and have launched the Lewisham Resilience Plan to improve the condition of the track bed and hence reliability of signalling and points in the area before we undertake remodelling of the track, station and signalling later in CP6 and early CP7.



Figure 5-5 Current performance delivery - Southeastern

Working in collaboration with Southeastern, we fully expect to exceed our initial vision for Year 2 in CP6. This is largely as a result of the reduction in passengers using the railway caused by the coronavirus pandemic, requiring lower levels of train services and hence simpler and more resilient timetables. Our aim is to continue to deliver a high performing railway for both passengers and freight customers as the effects of the pandemic reduce.

While we are delivering record levels of performance, we have also taken the opportunity to look clearly at future risks to performance – there are areas that we can do better, and we have taken measures and developed schemes for the future. We continue to suffer from the effects of severe weather including soil moisture deficit, landslips and leaf fall in Autumn. We recognise that there remain huge challenges through the Parks Bridge Junction corridor and the impact of any incident on passenger journeys in key areas of Kent.

What have we delivered?

We have delivered the following to improve performance in Kent over the course of the last year:

- The Hither Green Resignalling Programme modernisation of signalling equipment, replacement of track circuits with more reliable axle counters, replacement of many key assets and work on the track and track bed to remove existing speed restrictions in the area. This facilitated the final signal workstation to move to Three Bridge Rail Operations Centre that will lead to the closure of London Bridge Signal Box.
- The Barnehurst Blockade in February 2020 we undertook a significant programme of works to stabilise cuttings and embankments for the long term resilience of the railway, removed thirsty trees that undermine cuttings causing landslips and numerous other works to improve the railway on the Bexleyheath line.
- We have introduced a new system called Hubble, tested in Anglia in 2019, to improve our management of trackside vegetation that is the root cause of delays in autumn. This allows us to track and trace areas requiring vegetation control but also forecast for the future so we can remove vegetation before it interrupts operations.
- We have recognised that operation through the Lewisham Signalling Workstation that controls the movement of trains through Parks Bridge Junction is extremely complex. We have designed a new methodology for this workstation introducing a second signaller to reduce delays in our most critical areas for a more reliable service through passengers.
- We have worked more closely with British Transport Police and Southeastern to reduce the likelihood and impact on others of

people putting themselves in danger on the railway. We have expanded our Welfare Officer teams to another 10 stations around the Network and continued with response teams to respond to crime and vandalism.

- We have introduced an Incident Response Team to our Inner Metro area of operations so we can get to the site of incidents more quickly and reduce the delay to passenger journeys by improving our fix times. We plan to introduce a second team to the Kent Outer Area later this year.
- We have implemented a wide programme of fitting remote condition monitoring to our key assets so we can monitor, track and trace problems before they occur but also get to the root of the problem more quickly if equipment suddenly fails.
- We have delivered a series of improvements to the track bed within the Lewisham area to improve the resilience of the infrastructure in this critical area.
- We have launched programmes to reduce the impact of Soil Moisture Desiccation from hotter summers with low rainfall that can lead to speed restrictions to maintain safe operations.
- Working with Southeastern, we have also supported the implementation of a paramedic team at London Bridge to help and treat passengers who become ill on train or at the station, introduced additional train despatchers at London Bridge and Waterloo East to reduce low level delays, introduced new technologies such as Aegis and Pulse to improve our understanding of where trains lose seconds in their journey and supported changes to our operational processes to reduce the impact of incidents on passengers.
- With Southeastern we have also created a single team management structure within our Kent Integrated Control Centre, reviewed and improved all our disruption management plans and invested in new technologies to help teams manage

better complex operating problems.

Future performance opportunities:

- Our Lewisham Resilience Programme is targeted at improving asset and track reliability in an area of strategic importance to passenger and freight routes. This will support future station remodelling works; track realignment works and resignalling that will follow in CP6 and CP7.
- It is our intention to split the Lewisham Workstation in TBROC in order to maximise the performance improvement to be gained from two signaller operation.
- We are working up business cases to further improve our approach to prevention of soil moisture deficit that has proven to be a much more regular occurrence than in CP5 with longer, hotter summers with low levels of rainfall becoming more prevalent.
- At the same time, we are studying further blockades to allow investment in the Hastings Line which has also suffered from numerous landslips. These works will be aimed at stabilisation of existing and potential landslip sites.
- We will continue to invest in changes to asset components and remote condition monitoring equipment. Over £6m will be invested out our high-risk earthwork sites across the region this year.

5.2.2 Sussex overview

In Sussex, our focus continues to be on presenting trains right time at the Thameslink Core, as well as protecting this area of the railway, treating it

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as our most critical asset to prevent incident and delay spreading wider across the network. Current performance delivery for GTR is shown in (Figure 5-6 Current performance delivery - GTR)





Working with GTR we have moved to use the new On Time⁸ and cancellation metrics as our primary measure of performance, providing a more transparent view for customers as well as providing targeted data on where our railway is not performing. To support this, a Head of On Time is now in position with a clear remit of driving the awareness and improvements necessary to make sure a successful 'On Time' operation, particularly into the Thameslink Core. We continue to work closely with teams in all areas of the business to develop and deliver a culture change around On Time performance.

 $^{^{\}rm 8}$ The % of recorded station stops where the train arrived less than one minute later than its advertised time.
Evolving this idea, we have broadened our focus and established 5 'Golden Corridors' on the Southern region; areas that have a significant impact on our wider performance if there is an incident. We are supporting these locations with a series of performance commitments setting out how we will improve reliability in these critical areas.

GTR's On Time performance is such that it's placed as the top highvolume Train Operator in the UK with 75% of trains arriving at every scheduled stop on time. However, despite this we are still experiencing too many service cancellations making this a key area of focus for GTR as we move further into CP6.

What have we delivered?

Behind the improvements seen in year 2, a programme of planned performance schemes has been progressed including:

- Multiple infrastructure initiatives, including signalling asset reliability improvements at key junctions to prevent track circuit failures, the renewal of signalling cables and fixing of webcams to monitor signal aspects
- Development of our Performance Improvement Management System; designed to provide additional rigour and governance around performance improvement
- Seasons/weather-related initiatives focused on protecting the Thameslink Core from vegetation incursions in the trains panwell, data-led rail treatment plans and taking accurate data off the train highlighting the deterioration of railhead conditions promptly
- Invested in Hubble technology which is now under trial; Hubble identifies locations where vegetation is encroaching on the railway and could ultimately result in a failure

- We are recruiting a nurse who specialises in mental health to be part of our first line response team to support those accessing our railway in need of support
- Investing in new technology to help us identify the causes of sub threshold delays which account for circa 49 % of all delays on our network
- We have implemented a programme of work specifically looking at train-borne technology to help identify overheating third rail assets and deterioration of the Overhead Line Equipment
- We are investing £10million to improve our management of landslips
- Developed wrong routing alarms that notify signallers if they have incorrectly routed a train
- Continued to deploy welfare officers to mitigate trespass and fatalities at key locations

5.2.3 Wessex overview

Current performance delivery for SWR is shown in (Figure 5-7 Current performance delivery - SWR)

Performance on Wessex this year has been above both our SBP and forecasted MAA levels. The high levels of trespass and fatality delays previously seen have been brought back under control and we are now consistently delivering the lowest levels of delays for over five years. Incident counts for fatalities are at record lows while trespass incident counts remain a concern. Trespass and welfare staff continue to be deployed at key hot-spot stations across the route and on the key Woking to Waterloo corridor where the most delay is incurred. This has helped mitigate the impact of these incidents back to the record low levels with our staff intervening in over 180 instances to prevent trespass or self-harm on our network and saving lives in the process.



Figure 5-7 Current performance delivery - SWR

Whilst asset performance was improved in the first half of the year comparative to last year (208 less incidents), there has still been a significant number of disruptive infrastructure incidents. This year our track and earthworks have been particularly affected by prolonged periods of dry weather resulting in the condition known as Soil Moisture Deficit (SMD) and numerous SMD related speed restrictions whilst shorter but intense periods of heavy rain have culminated in landslides at Wallers Ash and St Catherines tunnel. Our overall position on speed restrictions is very positive. Following targeted action plans being delivered to both remove restrictions in place and prevent new ones being imposed, we are now delivering the lowest level of speed restrictions recorded on the route over the last 5 years.

Most of the performance categories directly influenced and managed by South Western Railways this year show a lower level of impact than last year, but this is in part, due to the lower level of train services being operated.

What have we delivered?

In Wessex, our Joint Performance Improvement Centre (JPIC) was established at Waterloo in December 2018 and continues to play a leading role within Network Rail and South Western Railway, bringing track and train teams together. The JPIC remains focused on getting back to the basics of running a railway. The team are making sure that lessons are learned and embedded and is providing greater accountability for all the processes in the performance system.

The areas of strategic focus are:

- Resilience (starting on time) focusing on rail assets, depot and fleet availability
- Operational improvement (keeping on time) focusing on managing the train service throughout the day with forensic attention during the morning and evening peaks
- Recovery (recovering quickly from incidents) focusing on the management of incidents, our joint decision making, making sure that we identify and embed lessons learnt and keeping our passengers informed during incidents

Our JPIC supports frontline performance management, coordination of improvement activity, target setting and monitoring of progress against plans. The team is sponsored at director level by Network Rail and SWR. The key performance improvement initiatives that have been delivered include:

- Wessex Integrated Control Centre (WICC) reorganisation: Completed implementation of phase 1 (pod working, SWR Duty Managers, new roles and responsibilities formalised) and formal approval obtained for phase 2 in 2021/22.
- Online digital contingency and service recovery plans are now

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firmly embedded into daily working, tracked and monitored

- Control Continuous Improvement team launched and embedded into the plan-do-review process for improvement
- SWR Decision Support Tool integrated with crew and stock working to support correct and timely decision making when train services are disrupted
- Additional operations staff (controllers, signallers, mobile operation managers, train service managers and clerical support)
- Improved timetable performance, including extended turn-round times between services, so there is now more time between a train terminating and starting its next journey on the majority of SWR services, with simplified rolling stock diagrams so the same unit stays with the same train service
- Focusing on sub-threshold delays, using tools such as 'Quartz' and 'COSMO' with over 100 tablet systems being delivered to frontline station staff
- Timetable modelling capability now established and expanded to 70% of the Wessex geography with the first simulation of the December 2020 timetable feeding improvements into the May 2021 timetable change
- £2.3m capital investment approved for trespass physical interventions, such as platform-end barriers and fencing
- Implementation of a standardised Incident Learning Review process across all NR and SWR frontline teams to drive consistent continuous improvement activity, with over 100 recorded actions to date

5.2.4 Arriva Rail London performance

Current performance delivery for ARL is shown in (Figure 5-8 Current performance delivery - ARL). 2020/21 was the first year with ARL as a

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lead operator within Southern region. Together, we have developed a performance and governance structure to manage all 7 'lines of route' that span across three Network Rail regions. The focus between TfL, ARL, and NR has been to drive performance up to the best levels for each 'line of route'. In 2020/21 this was achieved for 5 out of the 7, with 2 routes seeing a significant increase in services since the previous best-ever levels.



Figure 5-8 Current performance delivery - ARL

What additional improvements can we make?

Despite the huge progress made with the initiatives outlined above, it is very clear that now is not the time to rest on our improvements. The continuation of our whole system approach, considering the capability of this complex and busy network, matching this with service demands and optimising the timetable must remain. We previously committed to address this. Our focus remains on strengthening our maintenance and response capability whilst we will continue to manage the risk of suicide and trespass.

Over the last 12 months there has been a relentless focus on removing speed restrictions across the Wessex route. Speed restrictions erode precious seconds from each train making the timetable less resilient. This time last year there were 55 speed restrictions on the Wessex route, today there are 8. A speed restriction task force was created focusing on removing existing speed restrictions, while at the same time carrying out targeted proactive work to prevent future speed restrictions from being imposed. We are one year into a two-year improvement project and over the next year the team will continue to proactively improve the track asset condition to enable our maintenance teams to maintain this position going forward.

5.3 Driving future improvements to train performance across the region

This section explores some of the key areas of our performance strategy for the rest of the control period and looks at how we want to further improve train performance.

5.3.1 A deeper understanding of delays

Whilst our plans are predominately focused on improving and mitigating delays caused by factors such as infrastructure, fleet, network management, weather and external factors such as trespass and fatalities, a significant amount of overall delay is not properly understood as it falls below the three-minute attribution threshold of the industry systems.

This sub-threshold delay can be the result of both small and large incidents. By gathering more information through a combination of

more data sources, the issues and root causes can be made increasingly transparent. We are committed to a relentless pursuit of understanding these delays, particularly by reducing unexplained and un-investigated delay to gather accurate, consistent, and reliable performance intelligence. This is now more important than ever before as the smallest delays accumulating in the network can hinder service punctuality.

We aim to lead the way by investing in cutting edge technology and analytics. We are working with Southeastern and GTR to harness real time on-train GPS information, to provide greater granularity of factors such as train driving styles and extended station dwell times that are currently unavailable from wider industry reporting systems. Understanding real time train running information gives real insight to underlying issues and how we can address them. Throughout CP6, we will continue to develop platforms that bring together cross-industry data to improve our understanding of the root causes of subthreshold delay, allowing it to be systematically reduced.

5.3.2 Our asset reliability

Strong infrastructure asset reliability is a key component in delivering a punctual train service. Our asset management plans are set out in detail in Section 1 with a strategy to reduce the amount of reactive maintenance, transitioning to more focused, proactive, preventative maintenance.

The use of Remote Condition Monitoring (RCM) of assets and harnessing other technology is an important element of enhancing our maintenance capability and effectiveness. We continue to complete the roll out of Plain Line Pattern Recognition and Eddy Current technology which provides an enhanced view of our asset condition and supports our transition to greater targeted asset interventions. Sussex and Kent routes continue to develop the capability and productivity of our two Mobile Maintenance Trains. This is through enhancements such as the train not being required to work in a possession, and through working with the adjacent line open, automating the isolation process and delivering increased functionality such as an inbuilt ballast rail vacuum and welding capability.

5.3.3 Our external delays

Delays attributed to external incidents continues to be a significant cause of concern. Throughout COVID-19 restrictions, we have continued to see trespass and fatality incidents, though the impact of these incidents is less with fewer train services, there is more to be done to sustainably tackle this industry issue. The delivery of an ambitious external delay reduction plan is a key deliverable for Sussex, Kent, and Wessex routes.

A dedicated team of British Transport Police officers has been funded to enhance the resources available to the Kent, Sussex and Wessex route crime teams, providing additional depth in terms of focus and follow up. For example, working with local schools and communities to proactively prevent route crime rather than just respond to it.

5.3.4 Our operating strategy

Trespass and welfare staff continue to be deployed at key hot-spot stations across the region with successful interventions preventing incidents in the first place. For example, Wessex route has recorded over 180 interventions to prevent trespass or self-harm on the route – this has not only saved lives but avoided the knock-on impact on others affected such as the driver, other passengers, and the wider community. Our operating model also considers the use of technology in managing these types of incidents on our network.

Operational capability is fundamental to running a safe and punctual railway for our passengers. Our CP6 workstreams combine the delivery

of new technology and the development of our people. Key areas of focus are:

- Automatic Route Setting and development of Traffic Management
- Electrical Control / SCADA
- Route Control
- Incident Management

We are working in close collaboration with SWR to deliver a series of improvements to Basingstoke ROC, with focus on giving our teams the tools they need to recover the train services following disruption. A Continuous Improvement Team, made up of subject matter experts from Route Control in Network Rail and SWR, has been formed to deliver specific improvements to continue to build capability in incident management, train service delivery and real time information for passengers.

Traffic Management

In Kent and Sussex, traffic Management is one of the innovations planned for use in delivering a high frequency, high performance railway. This is linked with our use of Automatic Train Operation (ATO) through the Thameslink Core on the lines approaching London Bridge, through Blackfriars and to Kentish Town. In Kent and Sussex, the planned delivery of traffic management has been curtailed with concerns that the proposed technology and process changes were not sufficiently well developed, and the business change challenge would not be well met. We are now revisiting the baselining of current processes and 'problem statements' with a view to ensuring any proposed technology changes match well to current and 'to-be' processes.

Additionally, work is ongoing on delivering ARS into one of the country's busiest Area Signalling Centre at Three Bridges Rail Operating Centre (TBROC) and we are considering development options for a workflow and

productivity improvement tool targeted at incident management in Kent and Sussex.

Electrical Control / SCADA

Kent, Sussex, and Wessex routes' electrical control rooms form part of the national programme to update the life expired SCADA assets at control centres in CP6. Although the primary driver is asset renewal it also unlocks future benefits such as electronic securing of Negative Short-Circuiting Devices which will not only enable a step change in electrical safety, but also facilitate improved access efficiency.

Southern region commissioning has commenced at Raynes Park on the Wessex route and, despite challenges, renewals work continues across the three routes.

Route Control

Together with Southeastern, in 2019 we moved the Kent Integrated Control Centre from Friars Bridge Court to Puddle Dock near Blackfriars. This brand-new state-of-the-art Control Room is now embedded and has supported further collaborative team working to deliver a punctual and reliable train service for our passengers.

We continue to work with operators to transform our Three Bridges ROC. Project Ruby aims to create an exemplar Control Centre with an integrated, highly trained, motivated and engaged team that is focused on delivering the best service for our customers every day, enhancing the reputation of UK rail. Utilising the latest technology, we aim to be able to stay ahead of ever-increasing demands on our service. This is a joint initiative between Network Rail, GTR and Arriva Rail London.

In Wessex Route, via the Control Transformation Programme, NR has worked partnership with SWR, other TOCs/FOCs and external suppliers to develop a completely new and fit-for-purpose 'service pod' solution for the Wessex Route. The focus continues to be on delivering a bespoke solution to deliver a 'best in class' command and control solution for the Wessex Route. The introduction of service delivery and incident management pods, has improved communication and helped recover the service guicker after disruptive events.

Incident Response

Delivering a safe, timely and consistent response to incidents is critical to minimising the impact of disruption to our passengers. In the Southern region, a new Incident Management System is being developed which will simplify the control processes associated with the hundreds of incidents which occur every week. While this is a positive step forward there is still significant development required in CP6 to realise the full benefits, particularly around interfacing with other industry systems. Airwave radio has been deployed across the Kent and Sussex routes and is being rolled out in Wessex. It provides direct communication from Control to operational staff on the ground during incidents. This removes the need for multiple telephone calls, improves situational awareness and speeds up decision making.

6 Customer and Communities

6.1 The effects of the pandemic

In a normal year, the Southern region has an impact on over 700 million passenger journeys every year. Our CP6 business plan was built upon the assumption that passenger numbers would continue to grow throughout the control period. Whilst there currently remains uncertainty as to how many, and how quickly passenger will return to the railway, the approach to centre our plan around our passengers, putting them at the heart of everything we do and focusing on improvements to their journey still remains very relevant. We of course recognise that needs and requirements may be permanently changed by the pandemic and are very conscious that we need to remain vigilant and agile to recognise and respond to these changes.

This year the pandemic has impacted heavily on the usage of our railway. We have seen fluctuations in demand mirroring the restrictions in place by the Government. At the height of the first lockdown (April) a reduced train service was implemented, and we saw passenger numbers fall by 90% of their pre-covid levels. As Government restrictions were lifted passenger numbers increased steadily to a point where we saw around 60% less passengers but this has since decreased again as England has entered its third lockdown and again passenger numbers have fallen to around 90% of their pre-covid levels.

As set out in section in the introduction to this plan, at the start of the pandemic we set ourselves two strategic objectives – (1) To keep our people and their families safe, and (2) to deliver a railway that meets the needs of our passengers, freight-users and stakeholders. In the context of the pandemic, despite the significant reduction in passenger numbers, this second objective means that we have continued to strive to deliver a

safe and reliable train service for our passengers, so that key workers are able to continue to travel to work and that freight companies are able to keep vital goods moving around the country. We have put in additional measures against COVID-19 at our managed stations, to help passengers and staff feel safe and secure, and to help and remind them to maintain social distancing. We have also worked hard to ensure that our lineside neighbours and communities are kept abreast of our plans. We have striven to retain confidence in the railway so that once the pandemic has passed, people feel safe to come back and travel with us once again.

6.2 Putting Passengers First

Our routes lead on our local relationships with our customers, passengers and stakeholder. Each route is led by a Route Director who is accountable for the business performance of their respective route and ensuring that our local plans reflect the needs of those using the train service or with a vested interest in its development or operation. More information on our operating model can be found in Section 3 Southern Delivery Framework Putting Passengers First.

The region also has a Stations Director who is accountable for the performance of and passenger experience at our managed stations; ensuring that we are focused on making passenger centric improvements at these major gateways to the rail network. The Stations Director directs a programme focused on implementing transformational change across our stations portfolio empowering our teams to place the passenger at the heart of everything we do.



Figure 6-1 NHS Superman at Waterloo celebrating the NHS/ Key workers

6.3 Customers

We regard the train and freight operating companies as our customers, with whom we collaborate closely to effectively manage and run the railway for the benefit of passengers. Our objective is to be recognised as a dependable partner as only by working together can we develop and deliver the improvements our passengers and stakeholders deserve.

To this end, we collaborate closely and come together regularly in a range of different forums every period. Examples of these meetings include the GTR Alliance Board, Southeastern Alliance Board and South West Alliance Board, all of which are attended by the relevant Route Director, the Regional Managing Director and other senior representatives of the route and the TOC. The GTR Alliance Board also includes passenger representatives, including Transport Focus.

The objectives of these boards are to critically review performance period on period, and to strategically develop and drive joint initiatives which will help to deliver better train performance and passenger experience.

The strength of the relationship between Operators, Network Rail and the DfT in the Southern Region has allowed us to set up a 'first of its kind' forum to discuss the whole railway system – put simply, how can we work together to better Put Passengers First. The first meeting took place in December and represents an exciting opportunity to get on with industry reform and for the Southern Region to pilot new ideas.

Largely driven by COVID-19 we have also created the London Transport Alliance which our Regional Managing Director chairs alongside David Statham (Southeastern). This group, which includes senior representatives from TfL, seeks to coordinate, at very high level, our internal and external response to COVID-19 across London. We are also working closely with pan London comms colleagues from DfT, RDG, TOCs and TfL to focus on engagement with the whole business community, to reassure them the network is safe and adaptable to support their future business needs.

We are the 'lead' region for four TOCs whereby we own the contractual and overall relationship for Network Rail. These are GTR, Southeastern SWR and Arrival Rail London. CrossCountry and GWR also operate passenger services on our network along with many of the FOCs. We are not the lead region for these customers but how we perform matters to them and their passengers and freight users just as much. The pandemic and the resultant dramatic fall in passenger numbers has meant that the government has had to step in to support most of the train operating companies. Our four 'lead' TOCs all find themselves in this situation and are subject to ongoing discussions with the DfT around their future contractual arrangements. We are supporting our operator colleagues where we can through these discussions and ensuring that both our response to, and the recovery from the pandemic is aligned.

GTR

GTR (Govia Thameslink Railway) operates one of the most complex rail operations in the UK under four brands:

- Thameslink operating train services through London from Bedford, Luton, St Albans, Brighton, Wimbledon, Sutton and Sevenoaks
- Southern operating train services into London from the South Coast, through East and West Sussex, Surrey and parts of Kent and Hampshire
- Great Northern operating train services into London from Peterborough, King's Lynn, Cambridge, Hertford North, and Welwyn Garden City
- Gatwick Express operating a non-stop train service between London Victoria and Gatwick Airport

Sussex is our lead route for GTR, although the network is so vast that it also interacts with both our Kent and Wessex routes, and Network Rail Eastern region. Train performance suffered badly during the major engineering works upgrading London Bridge and the Thameslink infrastructure upgrade and following a major timetable change in May 2018. Before the pandemic train performance was in a much more stable position. Train service cancellations remained higher than target and were a focus area along with jointly improving the customer experience and optimising the new journey and train service opportunities afforded by the upgraded infrastructure. GTR is currently under an ERMA (Emergency Recovery Measure Agreement) with the DfT which is due to expire in September 2021.

Southeastern

Southeastern has been running the train service between London and Kent and parts of East Sussex since 2006, normally operating over 2000 services every weekday including the domestic high-speed services from St Pancras to Kent. Other key London stations served are Victoria, London Bridge and Charing Cross. In total the TOC serves 180 stations, managing 164 of these. South Eastern is currently under an EMA (Emergency Measures Agreement) with the DfT until October 2021. Our Kent route leads our relationship with Southeastern. Prior to the pandemic we were jointly focused on building on performance improvements seen over the last few years.

SWR (South Western Railway)

SWR operates commuter services to and from London Waterloo to South West London. SWR provides suburban and regional services in the counties of Surrey, Hampshire and Dorset, as well as regional services in Devon, Somerset, Berkshire and Wiltshire. It also operates the Island Line service on the Isle of Wight. SWR operates almost 1700 train services per day. Wessex is our lead route for SWR. During the first year of the control period, poor train performance for SWR and the Wessex route was a major business issue. Much joint work was focussed on arresting a long-term decline in punctuality. Performance now on SWR has dramatically improved this year and, although a key element of this will be attributable to the reduced timetable that has been operating for most of this year, this will also be in part due to the focus and coordinated effort of our joint performance plan with SWR. At the time of writing, SWR is currently under an ERMA that is due to expire on 31st March 2021.

ARL (Arriva Rail London)

Southern region is also the lead region for ARL. ARL operates the London Overground service under a concession agreement with TfL. The London

Overground services run over infrastructure operated and maintained by three different Network Rail regions (Eastern, Wales and Western and Southern). Our 'London Rail and Integration Director' leads the relationship with ARL for all Network Rail and will also co-ordinates Network Rail's response to pan London issues.

Normally, ARL operates over 1500 London Overground services carrying more than 520000 passengers a day. 30 percent of all Londoners are less than a 15- minute walk from an Overground station. Over the past two years our colleagues in Eastern region have worked with ARL and TfL to help introduce brand trains on the Liverpool Street services and on the Gospel Oak to Barking route.

CrossCountry

CrossCountry operates nationwide passenger services across the UK serving Southern destinations including Southampton, Guildford, Basingstoke, Bournemouth and Winchester. We recognise the value to the economy and the benefit that these long-distance services offer passengers of the Southern region and will make sure that CrossCountry's interests are equally well served.

GWR

GWR services interact with our infrastructure between Reading, Guildford and Gatwick airport and along the south coast between Brighton and Southampton. Wales and Western are the lead region for GWR but we also recognise GWR as an important customer, in particular the important service it provides connecting Gatwick airport to the west of England and we have been working with GWR to strengthen the service offering along this route.

FOCs

Freight and National Passenger Operators (FNPO) has an embedded

Freight team of three people in Southern region collaborating with Freight Operators, CrossCountry and freight end users to improve overall national service delivery.

Appendix D provides more details of how we will work with the freight operators to deliver their objectives.

6.4 Passengers

Southern region covers over 544 stations, which are the main gateways for passengers to the operational railway. The latest figures released by the Office of Rail and Road (ORR) reveal that London Waterloo remains Britain's busiest station. Between April 2018 and March 2019, 94.2m passengers used the station – an estimate calculated largely on ticket sales. Other stations in the Top 10 managed by Network Rail Southern region include London Victoria, ranked number 2, with 74.7m passengers and London Bridge with 61.3m, in fourth place.

Travel experiences and the interactions passengers have on their journey, all influence their satisfaction. This includes factors from how punctual and reliable the train service is, to the availability of seating on the train and the experience of navigating through the station.

In Section 5 Train Service Delivery, we describe our high-level plans to improve train performance with our TOC colleagues. We also have a considerable influence on the passenger experience at our managed stations.

Our managed stations transformation teamwork alongside our train operator partners to identify passenger types and explore, via the use of journey mapping, where we are getting things right and wrong. This insight has driven passenger priorities which will be embedded in the region, giving our teams the clear understanding of the needs of our passengers and how decisions we make impact them.

We know that passengers do not recognise the difference in responsibilities between the organisations that operate the railway (Network Rail, Train Operating Companies and TfL) and why should they? Our passengers are largely concerned with having a reliable, safe and accessible transport service to complete their journey and expect the same excellent service from all organisations.

We will continue to focus on delivering improvements in CP6 which will promote closer working with our industry partners and further collaboration to create an integrated and seamless journey.



Figure 6-2 The Valley - Charlton FC mural

6.4.1 Updated NRPS results

The National Rail Passenger Survey (NRPS) provides us with passenger opinions and satisfaction for both our managed stations and the train service. These results are collected twice a year in train stations to give us a report for spring and autumn. The latest survey for the Spring wave was carried out between 27th January and 16th March 2020 a slightly shorter time period than usual due to COVID-19. In total there was a sample of 2,354 responses from our 7 managed stations. The Southern region managed stations combined score is 85.3%, this is a 2.1% increase compared with the Spring 19 results. This score is the highest we've ever achieved and the 4th consecutive wave of surveys where we have seen an increase (comparing a season with the same one last year).



Figure 6-3 Trend of the Southern region Managed Stations NRPS scores

In Wessex we continue to see an increase in performed too, with the route scoring 80.9% overall. We have some exciting transformational projects scheduled which we expect to result in a further uplift in scores in future NRPS surveys.

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Stations within Kent and Sussex continue to perform well, results improved by 2.8 % compared to last Spring. This takes us to a record high of 88.3 % satisfaction level for the routes.



Figure 6-5 Kent and Sussex Routes Managed Stations NRPS score

6.4.2 Passenger information during disruption (PIDD Plus)

Our passengers consistently tell us and our train operating partners that we don't provide timely, accurate, helpful and empathetic information during disruption to the network. In addition, it's not always easily understandable and accessible when it is available. As a result, passengers are not able to make informed choices when the service is disrupted, and our frontline teams are not able to provide the support passengers need.

To address this issue, Network Rail, GTR and Southeastern have developed a joint programme to improve the passenger information available to passengers before, during and after their journey. This programme has five workstreams covering how information flows from a disruption incident, through to the Command and Control structure and down to frontline teams and passengers.

Some of the tangible changes that have been introduced to improve the experience for passengers include:

- Routine capture of images from incidents, so that passengers are better able to visualise the cause of delays
- The prompt deployment of enhanced explanatory twitter threads to explain the detail behind live operational incidents and the action we are taking to recover the situation
- A large pool of 'delayed explained' videos are now available on the Network Rail website, with further topics under development.
- Introducing a Southern region volunteer scheme whereby staff can be called upon during disruption who are trained to deliver excellent customer service and are familiar with the station.
- Introducing information champions at the managed stations who have the sole focus to ensure passenger information is pushed to passengers across all formats in disruption events.
- Use of the large format advertising screens within the Southern Region managed stations for the use of passenger information during disruption. These screens can now be used to:
 - Inform passengers of severe delays
 - Update passengers during severe disruption
 - o Mobile touch screens have been introduced into stations

giving passengers the ability to plan their journey with live train information and wayfinding capability.

- An alternative travel options app for passenger during disruption is in development, which will contain real-time information including lifts and escalators availability.
- Enhanced 'human touch' joint apology gestures are being deployed after impactful operational incidents

Initial passenger responses to these enhancements has generally been very positive.





Improving the baseline passenger experience

The CP6 passenger experience plan has been jointly developed with our train operators using passenger insight data. We will further develop how we collect and measure passenger feedback throughout CP6 and continuously search for new methods to address future requirements.

Brilliant basics in stations

As identified through the passenger hierarchy of needs (Figure 6-7 Passenger hierarchy of needs) and supported by NRPS, there is a set of basic needs that the passenger expects, providing the minimum level of satisfaction to their journey.



Figure 6-7 Passenger hierarchy of needs

Seating

Availability of seating was highlighted as needing improvement in all stations through insight. New wooden seating with charging points and tables have been installed in year 1 of CP6 at London Bridge, Victoria, Charing Cross and Canon Street stations. As part of our year 2 CP6 enhancements we have also installed the same new seating at Waterloo.



Figure 6-8 New seating at Waterloo Station

Cleaning

Providing a clean environment for passengers is key. In year 1 of CP6 we have engaged a facilities consultant to review our cleaning contract. We have seen an improvement in quality demonstrated by the audit results and a reduction in cost of the service provision. This new way of working for our cleaning teams has been rolled out to all our other stations in the region.

Station Maintenance

Asset reliability and maintenance are a major focus centred around lifts and escalators. We have undertaken independent studies on the performance of our lifts and escalators. As a result of these studies are now undertaking several improvement programmes which will see the reliability of our lifts and escalators increase by 60%. The stations have also now taken on the accountability for these at franchise stations too. A new organisation structure has been developed to make sure that all soft service roles now report through the Facilities Manager role.

Information Provision

We want to ensure our passengers can get accurate and timely information about their journeys and any other queries they may have. As part of this we recognise that it should be easy for passengers to see where they can get this information in a busy station. So, we have now installed 2 new information pods at Victoria station which include illuminated signage, ensuring we can deliver excellent customer service to our passengers.



Figure 6-9 New information pods at Victoria station

WIFI

The use of digital technology and the requirement for WIFI is now seen as a basic need for all passengers. This is also needed by station colleagues to access service updates to better inform passengers. Installation has now been completed at Victoria station and London Bridge platforms and a full WIFI roll out will be completed in Southern Region stations by June 2021.

Toilets

The toilet facilities in stations have been identified as not being acceptable standard. Victoria station has been refurbished being

awarded the best toilets in the transport sector at the Loo of the Year awards 2019. We aim to upgrade and increase facilities in all other Southern region managed stations by the end of CP6.

Wayfinding

A central programme to develop a new wayfinding standard has been developed and funding will be sourced to roll this out to Victoria Station first and our remaining managed stations by the end of CP6.

Station Ambience

This year we have improved the station environment and ambience with the help of a local artist to create several murals within our stations. In addition to this, we have enhanced the hoarding around the ticket vending machines (TVMs) at Victoria station. The TVMs are now housed in a colourful moss wall.



Figure 6-10 Station murals and moss TVM wall

Safe and Secure

We have continued to focus on escalator safety, particularly at London Bridge where we have the highest number of escalators and an unusual station layout with the platforms above the concourse. This year we have trialled placing our customer assistants during peak hours at the bottom of escalators encouraging people with heavy luggage to take the lifts and encouraging people to hold the handrail and take care. As already discussed, we have also adapted our approach considering the pandemic. We have provided hand sanitiser and made face-masks available, we have changed layouts and signage to promote social distancing and enhanced our cleaning regimes with recognised anti-viral products.

6.4.3 Transformational workstreams

One Team approach

To enhance the experience across our stations for all our passengers, Network Rail and train operators (TOCs) have been working together to deliver a One Team approach. The objective of this new way of working is to create a seamless experience for passengers travelling through our stations. The most obvious manifestation of this from the passenger perspective is the one common uniform. Starting at Victoria, and now rolled out to London Bridge, Charing Cross and Cannon Street, passengers can no longer distinguish between NR and TOC colleagues, creating one consistent look. Behind the scenes, colleagues are benefitting from joint training courses, joint communications (incl. newsletters and shift briefings), joint inductions and shared accommodation spaces, equipping them with the right skills, training and relationships to deliver an enhanced passenger experience. The team are now working with colleagues at Waterloo, Clapham Junction and Guildford to look at the rollout of this way of working. In response to the Emergency Recovery Measures Agreements (ERMA) issued by the DFT to many of our train operating colleagues, Network Rail is working collaboratively with TOC colleagues to respond to the requirements outlined in these agreements and drive further collaboration to remove duplication between organisations and enhance the passenger experience. The objective of the ERMA requirements is "To provide a seamless experience to customers such that they are not able to distinguish between Network Rail (NR) and Franchise Employees at NR Managed Stations, resulting in improved passenger experience and cost efficiency outcomes". The objectives, based around collaborative working and cost efficiency outcomes, will drive a more cohesive and efficient industry. The Southern Region is in the advantageous position of being able to build upon much of the success already delivered in our Kent and Sussex stations, whilst using our learning to develop and roll out plans for Wessex.



Figure 6-11Staff member at Victoria station in the Team Victoria uniform

Accessibility

The creation of the Accessible Transport Policy has driven a renewed

focus on the service provision available to passengers. We want our railway to be accessible and easy to use for all members of society. Working with the train operators, the focus is on the service we provide for less able people, those with hidden disabilities and those who are not regular rail users. We are investing in additional staff to improve service, together with investment in equipment such as new mobility buggies and meeting points. Our maintenance strategy for our lifts and escalators is being reinforced, recognising that a broken-down lift can have as big an impact on a journey as a broken rail for those with reduced mobility.

Recycling

To improve recycling at stations, we have engaged with a supplier to trial a process whereby we manually segregate waste from trains, station and retailers. At Victoria Station waste is being segregated on site, cleaned and baled before being collected by the appropriate recycling contractor. The new process allows NR to accurately charge retailers and TOCs for each waste bag used. After 4 months achieved a recycling rate of 93 % from 12.9% pre-trial. There is an aspiration to role this initiative out further during CP6 although plans have been impacted by the pandemic which, with the fall in passenger numbers, has seen may retail units temporary close and, as a result, the amount of waste at stations has fallen accordingly.

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Figure 6-12 New mobility buggy at Waterloo station

Training

A regional station training and competency manager has been in place since the beginning of year 2 giving us the in-house capability to develop a training needs analysis for all colleagues and tailor training accordingly.

Retail

This year, as part of the Putting Passengers First programme, all station retail accountability was transferred to the Southern region along with the management of the commercial estate outside of the managed stations. One of the starkest impacts of the pandemic on Network Rail's finances has been the dramatic fall in retail income caused by the low levels of passengers travelling. On Southern region, we have seen over £180m wiped off our property income forecasts for the control period. We are well advanced in writing a retail recovery plan for the region, to ensure that post-pandemic we can drive income back quickly to pre-covid levels. At the heart of this plan are station specific commercial strategies

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that will be used to drive a prioritised plan to maximise the revenue opportunities whilst being cognisant of the operational and passenger requirements.

6.5 Lineside neighbours

We recognise that we interact with the general public other than passengers. A significant number of people live close or next to the railway and their lives can be affected by our behaviours and performance, even if they never use the train. Our engineering work can often be noisy using heavy machinery and is often undertaken at night or at weekends conflicting with peoples sleep and leisure time. We need to be considerate and communicate carefully what we do. We are looking at more proactive means of engaging lineside neighbours, including the innovative use of technology for pre-notifications. We are collectively committed to enhancing our service to lineside neighbours and are confident that we will deliver sustainable improvements in this area. In the area of handling customer complaints our overall performance continues to improve. We have put in place an ambitious improvement plan to keep us focused over the past 12 months. This focus has already led to a backlog in Wessex being cleared with new processes and reporting and a more challenging 14-day response route scorecard targets implemented as a catalyst for change.

6.6 Community engagement

We have created the first regional Social Value and Charity Panel to drive forward our plan for tackling homelessness across the rail network, as well as working with charity partners and community groups to give-back to those living and working in our region. This group will input into our community engagement strategy which will build on the 100 murals on railway infrastructure and several community gardens we now have across the region. The use of volunteer leave is at an all-time low for the region, so we're working on a plan to create volunteering opportunities for our people that are compliant with COVID-19 regulations, enabling small teams to come together and improve health and wellbeing, team building, reduce the potential isolation of working from home, and of course, to Put Passengers First.

7 Sustainable Growth

RENEWALS COSTS (post headwinds and efficiencies in cash prices)

	Unit of Measure	Funded by	RF11 Submission CP6 (£m)						
			FY20	FY21	FY22	FY23	FY24		
			(Actuals)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	CP6 Total	
Track	£m	Renewals	211.2	217.8	197.5	164.9	170.7	962.1	
Signalling	£m	Renewals	141.8	175.4	182.8	251.1	253.5	1004.6	
Structures	£m	Renewals	42.0	83.1	74.2	117.0	89.8	406.1	
Earthworks	£m	Renewals	71.8	128.0	91.3	53.4	39.7	384.1	
Buildings	£m	Renewals	74.9	140.8	64.7	58.9	56.6	395.8	
Electricfication & Fixed Plant	£m	Renewals	44.3	79.7	77.4	112.8	91.8	406.1	
Total Drainage	£m	Renewals	9.2	25.2	13.0	21.1	15.7	84.1	
Telecoms	£m	Renewals	7.5	10.3	16.0	49.3	35.4	118.4	
Other Renewals	£m	Renewals	21.3	43.8	54.6	48.2	32.5	200.3	
Total Renewals	£m		624.0	904.1	771.5	876.7	785.7	3961.6	

Effective Volumes

Regional Effective Volumes		RF11 Submission						
Asset Type	Metrics	FY 20	FY 21	FY 22	FY 23	FY 24	Total	
E&FP - Con Rail	kilometers (km)	17	19	12	18	24	89	
E&FP - OLE	kilometers (km)	7	0	0	4	0	11	
Earthworks	5 Chains	34	101	148	150	51	484	
Signalling	SEU (Signalling	164	210	212	562	607	1,755	
	Equalivent Unit)							
Structures - Bridges	square meters (sq m)	1,297	3,358	3,113	5,101	2,676	15,546	
Track - PL	kilometers (km)	295	255	234	255	233	1,272	
Track- S&C	point ends (p/e)	101	115	112	83	140	551	

7.1 Context

This section of our Regional Strategic Plan looks at three elements of sustainable growth. Firstly, we discuss our overarching plans for environment and sustainable development before considering how we will sustainability manage our infrastructure assets over the control period to support growth. Finally, we outline possible enhancements to the network in the Southern region.

7.2 Environment and sustainable development

Since the creation of the Southern region, we have launched our new regional sustainability plan. The plan sets out how we will meet the objectives in the national Network Rail environmental sustainability strategy and demonstrates our commitment to creating a cleaner, greener, socially responsible region through the delivery of six new programmes.

Our strategy tackles regional, national and global issues like climate change, habitat loss, and social exclusion, and it was created using frameworks provided by the United Nations Sustainable Development Goals, the RSSB Sustainability Principles and the UK Government's 25 Year Environment Plan.

	Being brilliant at the basics We will create a culture that values sustainability at every level through improved training, engagement, leadership, and reporting.
50	Minimising waste and improving our circular economy We will reduce the amount we buy, reuse what we already have, and recycle as much as we can
	Reducing energy and carbon and improving air quality We will improve air quality, reduce energy consumption, and reduce our operational and embodied carbon emissions
- Cont	Enhancing biodiversity We will protect and enhance the wildlife and nature on our railway, leaving it in a better state for tomorrow than we found it today
\$282828 1111111	Managing infrastructure that is resilient to climate change We will build, operate and maintain a railway better able to withstand the impact of future climate conditions
	Creating social value We will continue to invest in our communities, deliver value for our neighbours, people and passengers, and leave a positive legacy

Figure 7-1 Sustainability plan

Through an integrated approach to sustainability, we will deliver the following outcomes.

7.2.1 Brilliant at the basics

We recognise that there is more to do to improve the way we manage our impact on the natural environment and local communities. Through this programme we will focus on getting the basics right and creating a culture that values environmental and social responsibility at every level by delivering focused behaviour change initiatives, improved training and competence, structured communications and engagement, visible sustainability leadership and reliable data and reporting. We commit to:

- Delivering training and increasing capability for all employees
- Managing environmental and sustainability risk, quality and assurance by integrating into regional Quality systems

• Creating a certified ISO 14001 Environmental Management System.

7.2.2 Minimising waste and improving our circular economy

We are committed to creating a circular economy approach to purchasing materials; reducing, reusing and recycling wherever possible. Through this programme we will better understand our waste streams, improve our processes for segregating waste at source and build resource efficiency planning into our project design. We will:

- Remove single-use plastics from our supply chain, except where alternatives are not safe or suitable
- Increase recycling rates to 95% and send zero non-hazardous waste to landfill
- Double the amount of recycled materials purchased from internal departments.

7.2.3 Reducing energy and carbon and improving air quality

It is crucial that we play our part in tackling the climate crisis, and for the Southern region that means committing to using 18% less energy and reducing our non-traction carbon emissions by 25% against our CP5 exit baseline. We are also improving the air quality at our managed stations and worksites through monitoring and action plans. Our decarbonisation programme will target removing diesel trains from our network, switching to renewable energy sources, building whole-life carbon assessments into our project designs and reducing the energy consumption across our buildings and managed assets. We are committed to:

- Installing smart metres across 700 sites and conducting energy efficiency surveys at 30 buildings and all managed stations
- Removing diesel generators from our project worksites where safe alternatives are available

- Identifying land and buildings for renewable energy generation
- Developing our traction decarbonisation strategy and progressing opportunities for further electrification.

7.2.4 Enhancing biodiversity

Habitat loss continues to be one of the biggest challenges facing our planet, and our region is committed to finding new ways to manage vegetation to run a safe, reliable railway whilst protecting and enhancing the wildlife and nature on our lineside. We're currently delivering a Habitat Management Pilot in the Kent route, trialling seven different vegetation management techniques across 70 different pilot sites to better understand our environmental impact and improve our regional processes as a result. We also working towards achieving no net biodiversity loss by:

- Increasing ecological competence and identifying opportunities for biodiversity protection and enhancement
- Creating biodiversity plans for legally protected sites and species, including Sites of Special Scientific Interest (SSSIs) and Local Wildlife Sites (LWSs)
- Establishing processes to measure the value, condition and benefits generated by wildlife and nature on our network.

7.2.5 Managing infrastructure more resilient to climate change

Climate change has impacted more frequent and more extreme weather conditions and our long-term ambition is to operate a railway resilient to climate change. Our reliable and sustainable asset strategy below provides the information on how we are managing our response to climate change.

7.2.6 Creating social value

Putting passengers first, valuing our people, caring for our lineside

neighbours and investing in our local communities are all part of our commitment to creating a socially responsible region and a positive legacy for future generations. We are passionate about putting people at the heart of our decisions, and our social value programme will target new ways to create benefits for the communities we serve. This year we created the first regional Social Value and Charity Panel, and through partnership work with our charity partners, community groups and supply chain we will:

- Deliver a Social Value in Action plan that provides a wide range of volunteering opportunities for our people
- Work with our five national charity partners to tackle homelessness and rough sleeping across the rail network
- Identify opportunities for increased social value through our supply chain spend
- Create an employability programme targeting those Not in Education, Employment or Training (NEETs).

7.3 Managing our infrastructure assets

The rail infrastructure in the Southern region is amongst the most heavily used and interconnected in the country. This makes service performance more susceptible to delay with relatively small incidents having the propensity to cause significant disruption for our customers and passengers.

Through CP5, we have seen increases in the number of train journeys, tonnage and passengers and we still expect this trend to continue in the long run post pandemic. Higher usage leads to more wear and tear on our network. We need to address this by increasing the investment in our assets and raising asset reliability further, for our highly complex, high throughput operating timetable to perform at the same level as the rest of the country.

Clearly 2020 has been a year like no other with the impact of COVID-19 initially on ensuring we could deliver work in line with Government guidelines to keep our workforce safe, exploring opportunities to intervene on a quieter railway and latterly as we understand the impact of reduced passenger numbers.

Although delivery has been steady in the year, we are looking ahead to ensure we balance our planned renewals work bank against opportunistic passenger benefitting and performance driven work and challenges in unit rates emerging against our plan. We will no doubt face some difficult investment decisions for the remainder of the control period, while making sure we're remaining agile in our response to emerging events.

7.3.1 Overview

With our CP6 funding, we will continue our strategy of managing asset condition through both increased maintenance and focusing our asset renewals based on sustainability criteria and line of route criticality to give the greatest passenger benefit.

The CP6 Determination provided an additional sustainability fund of £66m in Kent and Sussex, and £88m in Wessex for improving our track, structures and geotechnical assets. Whilst this was welcome, at the overall funding level provided, our modelling predicts a reduction in asset condition over the control period which we will need to manage.

We will also seek additional funding and develop strategies to improve our capability to make optimal use of the funding we already have. By continuously improving our asset management capability, this will provide:

• Improved understanding and articulation of the asset requirements that meet the strategic, tactical and operational

needs of our organisation

- A rolling seven-year asset management plan, evidenced based, sustainable and supported by passengers and stakeholders
- Improved process maturity in asset life cycle management, exploiting RM3 and ISO55000 assessment methodologies to drive continuous improvement
- Advanced quality of asset data for decision making and innovation
- Transformed access methodology centred around the passenger and asset requirements.

7.3.2 Asset intervention strategy

We have prioritised funding to sustainably minimise train service performance risk by focusing on delivery of safe railway operation, managing short term asset performance through increased maintenance and prioritising investment on asset sustainability for future performance. For the region's assets, sustainability means:

- Managing short-term performance risks arising from asset age and condition
- Maintaining asset condition based on criticality and funding available
- Providing a smooth work bank as far as is practicable

Due to the legacy of under-investment, underlying asset condition must be addressed as the priority to manage short term asset performance. An increase in maintenance is the only way to do this in the short term for the following reasons:

- Renewals cannot be delivered quickly enough because of the scale of the historic backlog
- Renewals of all our older assets would not be affordable
- Renewals will not contain the risk of short-term temporary

performance restrictions while they are delivered

• There would be insufficient flexibility to manage emerging risks.

7.3.3 Maintenance strategy

Our CP6 plan sees an increase in planned maintenance volumes ('Maintenance Standard Task'). It has also been necessary to increase reactive maintenance expenditure in areas where we have had to defer renewals in the past due to a lack of funding (most notably in buildings, structures and earthworks), and we are expecting increased reactive maintenance volumes for track.

Our current maintenance plan seeks to achieve asset reliability through a mix of planned maintenance, reactive maintenance and renewal of assets nearing their end of life. Our plans for CP6 will enable a transformation from reactive spending to focused, proactive, preventative maintenance. Our aim is a more systematic approach targeting failing assets, while continuing to deliver maintenance that is directly linked to safety.

In CP6, our aim is to deliver an updated mix of planned maintenance, significantly more targeted maintenance, full replacement of our worst performing assets, asset renewals, and a reduced spend on reactive maintenance. We will focus our resources on those assets with the highest failure rates and the biggest impact on train performance.

Mechanised track maintenance (i.e. tamping, stone-blowing and grinding) will be increased in cyclical access, timed to control defect propagation and minimise reactive maintenance. In particular, cyclical rail grinding in the Thameslink core will be targeted to mitigate the impact of Automatic Train Operation, where the potential for rail defects is increased through the acceleration and braking characteristics of the trains.



Figure 7-2 Maintenance Strategy

Our annual maintenance spend is forecast to increase from $\pounds 287m$ in year 1 to $\pounds 295m$ in year 5, driven by the following three main reasons:

- addressing the underlying poor asset condition
- meeting the increase in requirements following introduction of new infrastructure by enhancements funding in CP5
- facilitating a shift to targeted preventative maintenance. This will enable a reduction in the proportion of reactive maintenance and delivering increasing efficiency benefits to the region during CP6.

7.3.4 Technology (R&D) strategy

Safer Isolations

The current methodology of isolating the 3rd rail direct current (DC) traction power system to undertake work on the infrastructure is slow, labour intensive and exposes individuals to risk. It requires people to attend multiple trackside locations alone, often in the dark, whilst carrying awkward equipment. The Safer Isolations programme is transformational both in terms of safety and efficiency. During CP5, Wessex, Kent and Sussex Routes commenced the installation of new technology (Negative Short-Circuit Devices) which, supported by the upgrade of the SCADA electrical control system in CP6, will enable traction system isolations to be implemented remotely without the requirement for staff to go trackside. In addition to improving safety this presents the opportunity to increase productivity of teams working on the infrastructure by reducing the amount of time required to take the electrical isolation and in turn increasing the amount of time available for working on the infrastructure.

Whilst this programme of works is yet to be fully funded, our current provision will enable our vision that all 3rd rail mainline isolations on the Southern region will be taken using Negative Short Circuit Devices, and some will be remotely operated, by the end of CP6.

Intelligent Infrastructure.

Both research and development (R&D) and intelligent infrastructure projects have been selected from the national portfolio of candidate projects, based upon where we believe we can obtain most benefit from the investment.

In the Kent and Sussex Routes, we started to adopt Pattern Hypothesis to identify wider trends in asset performance in CP5. This involves using

existing data to prove or disprove a hypothesis, and to generate service delivery maps on how the assets provide service to the customer. This programme will be reviewed following the completion of tranche 3 of our Putting Passengers First programme to evaluate existing findings and value of the programme in order to refresh the approach for application at a regional level with new customer and stakeholder representatives.

7.3.5 Innovation strategy

Planning Transformation Programme

We recognise that access to work on our infrastructure is a valuable commodity. We must use it efficiently to deliver our essential programme of maintenance and renewals while minimising the disruption to our passengers. We will look to adopt new technology to reduce the time taken to set up and take down possessions and isolations and wherever possible package multiple works for delivery under one engineering possession.

Throughout CP6 we will focus on five key workstreams (People, Process, Safety, Efficiencies and Reporting and Technology) each targeting improvements in access planning and the delivery of planned work. We are working closely with the company wide Access Optimisation Programme to co-ordinate our plans and to share good practice.

Improving our process and business systems

We will use our Quality Improvement Programme (QIP) and Quality Management System (QIP) to review our key asset management and engineering processes. Our key processes have been document in the QMS (Quality Management System). Processes that require improvement are subject to a "deep dive" improvement activity to improve risk management and support the achievement of the objective of each process. We will continue to improve our understanding of asset performance requirements and their linkage to strategic outcomes, so we can present well evidenced business cases that clearly articulate the costs and benefits to customers, passengers, stakeholders and key industry decision makers. We will incorporate good practice from other regulated infrastructure sectors such as utilities with a target to achieve compliance with the international standard for Asset management, ISO 55001, by the end of year 3 of CP6. The new regional organisation will create the capacity and accountability for delivering Asset Management capability improvement for all its routes.

7.3.6 Asset management and engineering capability

We will improve our capability through better understanding of our asset base, enabling us to make better decisions, improvements in our process and business systems, and improvements in the capability of our people. We will continue to strengthen our competencies, build capabilities in data analytics and data driven decision making, improve our planning capability and transition to predictive maintenance regimes.

Valuing our people is a key workstream. We will become better at listening to our staff through our 'Your Voice' programme. We have already developed a soft skills training programme to improve commercial, understanding, articulation, learning, risk and performance improvement skills. This approach is aligned to the national 'intelligent client' programme including Sponsorship.

7.3.7 Delivery strategy

As well as securing the engineering access to the network, successful delivery is very much linked to the capability of the supply chain.

Our delivery functions (Capital Delivery and Works Delivery) have established robust strategies for CP6 that provide suitable access to the supply chain to make sure we have capacity and capability to meet the renewals and enhancements work bank. We are working closely with the supply chain at all levels, to provide clarity of the work bank and the associated pipeline of works to help make sure that the supply chain can efficiently meet our demand. As part of our Putting Passengers First regional changes, we will also look to implement regional category management and supplier relationship strategies across our Routes and delivery functions (Works and Capital Delivery) enabling us to give greater certainty to the supply chain and better informing delivery.

In October 2020, we made the positive step to transfer Works Delivery from the Routes to Southern Capital Delivery so that all capex delivery teams are within the same organisation. This provides a single point of contact for the Routes, better alignment of objectives and allows the allocation of work in a way that optimises the respective strengths and flexibility of the Works and Capital Delivery teams.

As part of the region's efficiency drive to support the sustainable development of our asset base, Capital Delivery is currently working through a series of 'Zero' Basing' reviews that help us to understand the specific activities that add the most value to our business. By understanding whether our project and programme delivery activities are for legal, regulatory, corporate mandated or corporate voluntary reasons, we will be able to align our focus on what adds the most value when delivering our work. By removing superfluous processes and making sure necessary processes are applied appropriately, we expect to free up capacity so that our teams are doing the right work and maximising added value. Benefits have already been realised in the areas of Commercial and Engineering where we have saved significant effort

by reducing reporting requirements. Zero Basing will also support the realisation of longer-term benefits by informing the implementation of the PACE (Project Acceleration in a Controlled Environment) process which will replace GRIP and allow projects to be delivered quicker and more efficiently.

7.3.8 Route asset strategies

Our route asset strategies remain largely as contained within the original CP6 plans for the Wessex and South East Routes. However, in future strategic planning cycles, there is the potential for a diversification of asset strategy for the Kent and Sussex Routes (formerly constituent parts of the South East) to best enable passenger-driven outcomes. For each Route, each asset type will have a distinct asset strategy and targeted plan for interventions.

The next sections discuss the Route Asset strategies for Kent, Sussex and Wessex Routes, grouped together as Southern Region. The start of the section has network maps showing the key renewals planned. The renewals schemes listed are not exhaustive but are included for illustrative purposes to demonstrate the scale of our plans.

1.

2.

3.

4

5

6. 7.

8.

9.

17. Grove Park

24. Ashford



Figure 7-3 Kent route key renewals

38. Wadhurst

OFFICIAL





Network Rail

OFFICIAL



Figure 7-5 Wessex route key renewals

Track

CP5 Exit Performance

Our track asset used life is the highest in the UK for all track assets and there is a risk of failure which has necessitated Temporary Speed Restrictions in CP5.

CP6 Performance

Track asset performance improved overall during Years 1 and 2 of CP6. In the summer of years 1 and 2, our passengers experienced a high level of speed restrictions due to extensive embankment desiccation and loss of good track geometry following the sustained hot weather in 2019 and 2020.

CP6 Strategy

To reduce the risk of asset failures, we have made the decision to increase preventative maintenance to support the step change in train service frequency and reliability associated with Thameslink services while remaining within the funding envelope. This means track performance will improve in the targeted critical routes but is likely to deteriorate elsewhere.

The introduction of rail milling as part of the rolling contact fatigue maintenance intervention allows a reduction in re-railing activity compared to the CP5 forecast on sites affected by rolling contact fatigue. This approach will release more rerailing volume to address other factors. Our targeted renewals and refurbishments of life-expired assets at critical junctions on the mainline and partial renewal / refurbishments to improve poor performing assets elsewhere will complement the maintenance interventions.

The CP6 Track Route Asset Strategies are a steppingstone towards achieving our long-term asset vision and it will take more than one

control period to reach our ultimate target. Within the funding envelope of CP6 we have made several risk-based trade-offs which mean that renewals levels are lower than those predicted by Network Rail's Safety, Technical and Engineering (STE) modelling. This will satisfy safety requirements, but at the expense of a step change in performance improvement, sustainability and large-scale efficiencies. Our proposed plans comprise targeted interventions, across both renewal and maintenance activity, to optimise the benefits from the funding available.

Work bank Optimisation

A planned intervention strategy with prioritisation given to renewals on track grades with a criticality of 1 or 2 with refurbishment and maintenance interventions planned on track with a criticality grading of 3, 4 or 5. A step change approach to utilise blockades will reduce the spread of impact to our customers and deliver benefits across multi-disciplines

CP6 Delivery Year 2 General

Investment plans have progressed in line with our Delivery Plan and we have met and exceeded all our key volume targets. The availability of limited blockades has enabled work to be delivered more efficiently and in conjunction with other disciplines to minimise repeated disruption to our customers.

CP6 Delivery Year 2 Kent

Key junction renewals have been undertaken to enhance performance and improve the asset reliability at Brixton, Parks Bridge, St Johns, Crayford and Slade Green. Additionally, we life extended more than 65 assets at junctions securing higher reliability.

12km of life expired track has also been renewed across Kent with new

technology also delivering a further 1.1km where conventional methods would have been less productive.

To reduce performance impacting rail defects, we re-railed 31km of rail across a variety of locations prioritised by the performance impact including the key corridor out of London Bridge. This exceeded our target to improve the asset.

CP6 Delivery Year 2 Sussex

We life extended more than 52 units at junctions and 9km of life expired track has also been renewed. We re-railed 34km of rail at locations prioritised by current performance impacts and known future potential issues. This exceeded our target to improve the asset and will enable performance benefits to be realised.

CP6 Delivery Year 2 Wessex

Our asset performance improvement was a direct result of our plans, including targeted plain line and points renewals. Corresponding improvements have been seen in the Track Reliability Index, the number of Service Affecting Failures, the number of serious defects and breaks and track geometry.

We life extended more than 35 units at junctions and 17km of life expired track and 28 units at junctions have also been renewed. We rerailed 19km of rail at locations prioritised by current performance impacts and known future potential issues. This exceeded our target to improve the asset.

Signalling

CP5 Exit Performance

We still have legacy infrastructure in some of the most critical Victoria

and London Bridge areas that needs to be replaced. This carries an increasing level of performance risk and so our plan for signalling assets in CP6 is further full signalling renewals focused in the London Victoria signalling area, and the London Bridge signalling area where new signalling has not already been delivered by the Thameslink Programme. Approximately a third of the signalling interlocking areas in Wessex are currently beyond their 25-year design life and another 10% are nearing the end of their designed operating life. This generates significantly more volumes of reactive maintenance, has a significant impact on performance and may also increase the risk of wrong side failures. There is a measurable 3-fold increase in the number of signalling failures within these asset age groups compared to interlocking areas that are less than 10 years old. Significant funding has been used to renew life expired and degraded signalling cables to mitigate the impact of failure on train performance.

<u>CP6 Strategy</u>

We will initiate migration from the Three Bridges Area Signalling Centre to provide advanced Automatic Route Setting (ARS). This is our first step towards full Traffic Management Systems that will enable automation, flexibility and diagnostics for operations.

We plan full signalling renewals in the London Victoria Signalling area, transfer of signalling control from London Victoria to Three Bridges Route Operating Centre (TBROC) and renewals at Angerstein and Hither Green.

The CP6 plan caters for the complete re-signalling of the Feltham control area, which was originally planned in CP5 along with Farncombe -Petersfield re-signalling, also deferred in CP5. The renewal of Feltham and Farncombe - Petersfield in CP6 will both reduce the total number of signalling failures and significantly improve service recovery following any failures within these areas. The Farncombe - Petersfield re-signalling scheme is planned to have the highest level of compatibility currently available with Digital Railway technology but will not be a DR installation.

We will improve reliability by increasing the use of axle counters and by replacing relay-based interlockings with computer-based ones and by using more LED-type signal heads. The strategy for the rest of the assets is to maintain the current level of asset performance through targeted external renewals. However, this will impact the sustainability of the signalling portfolio as it will result in significant investment being required in CP7 and beyond. However, it is assumed that this will alian with the wholesale rollout of a fully functional digital railway. We are aiming to maximise the use of asset remote condition monitoring with full coverage on critical assets. This will free maintenance teams to focus on preventative maintenance. Our latest financial reforecast underpinning this plan iteration, has highlighted that the accelerated spend in Y1 and Y2 will require prudence during the latter years of CP6. The impact of this is under review, with some less critical projects being paused or slowed to live within the constraints subject to formal assessment of safety and condition. Assets that are currently obsolete as well as the ones reaching obsolescence in CP6, will continue to require additional maintenance until a full renewal or a re-signalling can be delivered. Consequently, more planned and reactive maintenance activities have been included. This is partially offset by a reduction in maintenance volumes in the newly re-signalled areas.

Kent CP6 Delivery Year 1

As part of our commitment in Putting Passengers First, we have exceeded our plan for the first year of the control period. In Kent, the Angerstein re-signalling including the re-control from London bridge ASC to Three Bridges ROC was completed as well as targeted component renewal at

Sussex CP6 Delivery Year 1

Like Kent, Sussex has delivered over and above the original year 1 plan, completing the Lewes to Newhaven re-signalling scheme, including the recontrol to Three Bridges ROC. There have been targeted component renewals between Barnham to Havant during the blockade, on the Brighton mainline as part of the Thameslink Resilience programme and at Victoria Station Central.

Wessex CP6 Delivery Year 1

As part of the Feltham resignalling scheme we have successfully commissioned the 'Electrologix' trial site on the Shepperton branch, delivering a performance benefit from improved resilience to adverse weather

Kent CP6 Delivery Year 2

Hither Green interlocking area was renewed and is now controlled from TBROC. This area was the final interlocking controlled from the 1970s London Bridge Area Signalling Centre, which therefore closed in August. A trial has commenced at Gillingham for Alstom's "Smart I/O" object controllers as a forerunner to their use on Victoria Phase 4 onwards as well as future projects in the region and nationally. This will offer improved functionality and diagnostics compared with traditional Trackside Functional Modules (TFMs) used on older schemes.

Sussex CP6 Delivery Year 2

Targeted component renewals have continued along the Brighton main line, in particular the replacement of older track circuits with Ebitracks to improve reliability. Otherwise the focus is on planning and construction for two major phases of Victoria resignalling affecting much of South London later in CP6. Sensible access planning is a priority to minimise disruption in this busy area.

Wessex CP6 Delivery Year 2

Wessex has the only two NR sites nationally that use Siemens VICOS control systems and SIMIS-W interlockings as part of a Railtrack era attempt to improve supplier diversity, however ongoing support is becoming troublesome. To address VICOS obsolescence, new hardware was provided at both control centres (Havant and Bournemouth). Wimbledon Top Yard interlocking (which controls movements within a large depot and associated mainline interfaces) was fully rewired. Preparation for the commissioning for Feltham Phase 1 continues; the commissioning at Easter 2021 straddles the weekend marking the start of Y3!

Level Crossings

CP5 Exit Performance and CP6 Strategy

Level Crossings remain a core part of our safety improvement planning for CP6, and we will continue our CP5 work to close high risk level crossings. Although the former South East Route was the second best performing in the reduction of safety events (FWI) in CP5, we have prioritised further safety improvements on higher risk crossings, including red light enforcement cameras, automatic warning devices and other minor work improvements Renewal of 18 level crossings, two will be decommissioned and three will be recontroled. All our level crossings are regularly risk assessed, and this has informed our CP6 plans. In Wessex Route there are 315 level crossings remaining and we propose to close 17 (5%) during CP6. Where closures are not feasible, we have 28 conversions and improvement schemes planned to mitigate risk at these sites.

CP6 Delivery Year 1

We have renewed Chard and Elm Road level crossings as planned, reducing obsolete barrier equipment from the route. Cuxton Level

Crossing has been renewed within the year and changed from gates to manually controlled barriers.

CP6 Delivery Year 2

Southern Region is continuing with trials of new simple warning systems to find a more cost-effective way to provide active protection across more crossings. The risk reduction plans for the control period continue to progress well, with stage-gate reviews allowing reaction to change in delivery and funding.

Structures

CP5 exit performance

CP5 saw a deterioration in overall asset condition profile in Southern Region, particularly in the metallic bridge inventory, as anticipated additional funding through the 'Civil Adjustment Mechanism' did not materialise and planned volumes of work could not be achieved. In addition to an overall deterioration in condition, the assessment backlog recovery has shown that a large percentage of the bridge inventory is being managed at reduced factors of safety. Sussex and Kent have disproportionally high numbers of substandard bridges when compared nationally, and the highest proportion of metallic underbridge decks which now require significant investment.

In Sussex and Kent, the deterioration and subsequent failure of some of structures, notably the Dover Sea Wall and Lewisham flyover, caused significant impact on our passengers and freight operators due to the operational restrictions that ensued. In Wessex, the reliability of structures assets has increased in CP5 through the recovery of examination compliance and programmes of targeted maintenance intervention.

<u>CP6 Strategy</u>

Southern structures focus for CP6 funding is to target interventions on understrength bridges, with a high volume of strengthening works compared with CP5. This will make sure that our assets remain safe for operational use without long term network restrictions but with a continued deterioration in the portfolio condition. The intervention strategy will make sure that safety standards are met at all assets and, on assets where there is greatest passenger benefit, investment has been optimised to sustainably reduce train performance risk. However, funding reductions seen across Southern asset management in Y3-5 of CP6 has impacted the volume of activity planned in this period, reducing the planned CP6 exit position against baseline. In Kent and Sussex, a £35m reduction in CAPEX will mean 14 jobs in Sussex and 15 jobs in Kent being deferred to CP7, in addition to work at Cannon Street underbridge being started in Year 5 instead of Y4.

In Wessex, scope efficiencies through further assessment work have reduced the impact of a £15m budget reduction, with Clapham Retaining Wall and rolling programmes of risk reduction works being deferred to CP7.

CP6 will see a large investment in Ryde Pier and Cannon Street to sustainably manage our major infrastructure, the latter scheduled for completion in early part of CP7.

Work bank Optimisation

Strengthening or replacement of poor condition bridges, continuation of tunnel maintenance, culvert maintenance, footbridge refurbishment and renewal programmes, and coastal defence work at Folkestone Warren

Kent CP6: Delivery Year 1

All planned works were completed in Kent except for Minnis Road under

bridge, Stubblesdown footbridge and New Cross Road overbridge. Minnis Road under was originally a preventative and repair scheme, however intrusive surveys showed the condition of the main girders to be much worse than originally thought. It is now scheduled for a renewal in year 2. New Cross Road has moved to year 2 due to programme slippage. Stubblesdown footbridge has changed from a replace to a repair/preventative scheme and has moved to year 2 to enable enough time for development. This will result in a more economic scheme. Two footbridge schemes (one replacement and one refurbishment) have been brought forward from year 2 to year 1.

The major refurbishment of Preston footbridge at Faversham was completed in year 1. This had been a challenging problem for several years with a reconstruction originally planned. The completed project was received well by the local community and has enabled us to keep this historic structure, which sits within the curtilage of the listed station.

Kent CP6: Delivery Year 2

Most planned works were completed in Kent apart from the reconstruction of East Stout/Creek River/Minnis and Wincheap Road underbridge. In addition, the reconstruction of Alice Dean and Brooks overbridges has slipped to Year 3 due to delays in agreeing a formal works agreement with Kent CC prior to contract award. Trackside refurbishment work at Loampit Vale underbridge was brought forward from Y3 to maximise possession utilisation for the Hither Green Resignalling blockade. The remaining non trackside work will be delivered in Year 3. Replacement of Mount Street footbridge, which is life expired has been delayed to Year 3 due to additional intrusive surveys being required to determine the condition of the existing foundation prior to the design being finalised.

COVID restrictions and the need to maintain social distancing has

significantly affected the agreed programme for the reconstruction of Minnis/Creek River and East Stour underbridges early in Year 2. These have now been re-planned in Year 3, following agreement of additional possession access with the TOC. The reconstruction of Wincheap Road underbridge, originally planned to be replaced in P12 of Y2, was deferred to future years due to unacceptable cost escalation. Instead of replacing the bridge, the agreed possessions will now be used to address significant corrosion to the main girders and completion of the planned work will eliminate the risk of traffic restrictions being required. To mitigate impact of delays to the reconstruction of underbridges, refurbishment works to Lewisham High Street underbridge XTD125 and Lewisham BEX555 and 556 under bridges were brought forward from Y3 and these projects were completed in line with the agreed programme.

Reconstruction of Cat 476 intersection Bridge was finally completed in August 2020. This was a major structure originally planned to be replaced late in CP5 but was delayed due to a combination of design and procurement issues. Its completion has eliminated the risk of further traffic restrictions being imposed. In addition to CAT 476, work at Belinda 276 Arch underbridge was also completed in Dec and this has enabled a traffic restriction on the ATL to be removed.

Sussex CP6: Delivery Year 1

All planned works were completed in Sussex other than Selsdon Road underbridge renewal, Brighton retaining wall works and repairs to the stonework and other works to the magnificent Ouse Valley Viaduct at Balcombe. The renewal of Selsdon Road underbridge was deferred to year 2, which enabled Sanderstead Road underbridge to be brought forward a year. This has given improved performance resilience to the Brighton mainline – Sanderstead Road was responsible for 47% of the bridge strike delay minutes in 2018/19 and its improved bridge strike dispensation will reduce significantly the impact of future bridge strikes. The works at Ouse Valley Viaduct have been re-planned into year 3 to enable careful consideration to be given to the stonework repairs on this historic structure. The retaining wall works have also been re-planned due to further intrusive surveys being required to develop the correct solution. The rolling programme of preventative works (high pressure water jetting and painting) at Eccleston and Elizabeth overline bridges at Victoria station has started. This approach is proving to be economic and several bays have already been completed.

Woldingham Viaduct has started on site but has slipped into year 2 with additional defects being discovered in the brick arches, following the commencement of works. The closure of the line between Edenbridge and Redhill due to an earthwork failure, has been used to undertake considerable additional maintenance works to Bletchingley Tunnel.

Sussex CP6: Delivery Year 2

Strengthening and refurbishment work at Oxted viaduct started on site but progress has been affected by COVID restrictions and the need for social distancing. The programme has also been affected by delays in some specialist materials not being available from EU countries affected by COVID lockdown. Whilst work is continuing site, the project is not now planned to be finished until Oct 2021, instead of the original completion date of May 2021. Refurbishment work at Eccleston and Elizabeth Overbridges is continuing and will continue throughout the rest of the control period. Delivery of the work on a rolling programme basis has enabled good output to be achieved and minimal impact on station operations. Subject to good access being available, refurbishment work to Elizabeth overbridge could be completed in Y4 instead of Y5.

Seldon Road underbridge originally planned to be replaced in Year 1 was replaced over Christmas 2020. The reconstruction of Selsdon Road together with the replacement of Sanderstead in Y1 and Old Lodge Lane
underbridge in CP5 have eliminated the risk of traffic restriction on this stretch of the VTB line which could have had a significant impact on railway operations.

Phase 1 of Fork No 1 underbridge was successfully completed in August and the remaining work is currently planned to be completed in Y4. This will allow access booked in Y3 to be used to strengthen the structure by replacing the understrength wheel timbers with FFU wheel timber.

Refurbishment work to Grove Road and Rialto Road footbridges which was originally planned to be carried out in CP5, was completed in December 2020. Refurbishment and strengthening works to TAT 16 underbridge have started on site and are due to be completed by the end of Year 2. Contracts have also been awarded for proposed refurbishment work to Wilbury overbridge and VTB114 Footbridge at Horley. Work on these projects will not be completed until Year 3 due to a lack of suitable access. Proposed repairs to Ouse Valley Viaduct and Brighton Retaining Wall have been further delayed to Year 3 to allow a more intrusive investigation to be carried out to determine the root cause of defects to be determined so that the most cost-effective solution can be taken forward.

Repairs to Woldingham viaduct was delayed from Y1 due to the discovery of additional defects and work being affected by exceptionally wet weather conditions. These repairs have now been completed and the integrity of the structure reinstated.

Earthworks

CP5 Exit Performance:

Much of the geology in the region is volatile and susceptible to significant ground movements under seasonal weather. 2014 and 2019 saw the

Network Rail

wettest winters on record, and passengers in the former South East route suffered from the highest count of delay minutes nationally attributed to earthworks failures. Inclement weather caused failures that also meant emergency interventions in unplanned areas had to be carried out, deferring planned renewals into CP6 in all three routes.

<u>CP6 Strategy</u>

Due to the significant impact on passenger and customer performance measures, earthworks investment has been increased over other asset investment. Although we expect performance-impacting events resulting from adverse and extreme weather will still occur, we will target interventions based on safety risk, location and the consequence of failure.

In the Wessex route, the strategy is aimed at maintaining the same level of earthworks reliability in CP6 from CP5 through increasing our volumes of preventative drainage schemes, remote condition monitoring and early, 'soft engineering' solutions. In Wessex the current volume of maintenance intervention allows us to mitigate areas where a more effective renewal or refurbishment has been deferred because of the affordability challenge. We have therefore increased maintenance spend to reduce the safety risk on these assets and have several deferred renewals from CP5 that will be carried through for renewal in CP7.

Across the region, we are investing in further Remote Condition Monitoring to mitigate the interventions that we cannot afford in the current funding envelope and reduce the impact of safety incidents.

Kent CP6 Delivery Year 2

Year 1 of CP6 saw one of the wettest winters on record, adding further pressure to the year 1 plan. In year 2 another wet winter caused failures at Newington, Bearsted and Borough Green to name but a few, as well as delivering planned renewals at Harley Shute, Wadhurst, Kent Hill, Catford and West St Leonards. We are exploring what additional measure over and above the base plan may be taken, including the acceleration of additional schemes into existing blockades and further enhanced monitoring to mitigate the level of reactive interventions required.

Sussex CP6 Delivery Year 2

Year 1 of CP6 saw one of the wettest winters on record, adding further pressure to the year 1 plan. In year 2 another wet winter caused failures at Salfords, Ockley and Hooley to name but a few, as well as delivering planned renewals at Oxted, Brighton, Tilehurst and Redbridge. As in Kent, we are exploring what additional measure over and above the base plan may be taken, including the acceleration of additional schemes into existing blockades and further enhanced monitoring to mitigate the level of reactive interventions required.

Wessex CP6 Delivery Year 2

Year 1 of CP6 saw one of the wettest autumns on record, adding further pressure to the year 1 plan. In year 2 another wet winter caused failures at Wallers Ash, Wanborough and Crewkerne to name but a few, as well as delivering planned renewals at Ashmead, Yeovil, Guildford and Wanborough.

Drainage

CP5 Exit Performance

The drainage asset portfolio consists of a large stock of largely Victorian piped drainage and many miles of open channel and unlined ditch. In most cases many of the pipes remain in good order, but the systems do not perform well as short lengths of pipe run can collapse, joints can displace, and many systems are simply blocked with silt and roots. Unless a system flows freely throughout its length it does not perform a drainage function, leading to wet ground that can negatively impact track quality, and lead to drainage system collapse and allow the track to flood.

Poor weather throughout CP5 led to the deferral of three years of drainage work in Sussex and Kent as investment in emergency works was prioritised. We therefore have a backlog of track drainage renewal work resulting in low resilience to flooding across the Kent and Sussex Routes.

<u>CP6 Strategy</u>

In Sussex and Kent, our focus is on recovering the backlog of drainage interventions and addressing high risk drainage systems (e.g. tunnels) to reduce the effects of flooding. Our aim is to have removed all existing Temporary Speed Restrictions caused by poor drainage by the end of CP6. DU maintenance volume targets have been significantly increased for CP6 with a target set for the proportion of track and off-track maintenance. The targets have been set on a risk-based approach to flooding and earthworks failures with key areas focussed. Asset information around tunnel portals will be checked and cleansed to ensure this high-risk area is prioritised.

In Wessex, the focus is on targeted repairs and mechanical clearance of existing systems to restore connectivity to bring these systems back into use. This will be complemented by an increased programme of proactive maintenance to keep the additional systems flowing once restored. Works are prioritised in areas with known track quality problems, and at complex junctions to prevent problems developing in these high-risk areas. System renewal will be undertaken at locations where track renewal is planned, to create deployment efficiencies in track access and site management, and to maximise service life of new track formations. Off track drainage consists largely of unlined ditches, these have had very little attention in recent decades. The focus in CP6 will be to locate, record and restore those assets that could reduce risk in soil cuttings, or which form part of the track drainage system. In high risk soil cuttings, the focus will be to assess system capacity to modern standards and to enhance the systems where required.

The delivery strategy acknowledges the risk that the CP6 target volumes exceed the current capability of our supply chain. This risk is partly managed through a steadily ramped profile for volume delivery throughout CP6 and will be dependent on our Works Delivery capability to attract and develop the resource needed.

Kent and Sussex CP6 Delivery Year 2

There has been a significant increase in planned and actual volume of drainage maintenance delivered in CP6 year 2.

Wessex CP6 Delivery Year 2

Year 2 drainage volume has been broadly delivered in line with our plan, with an over delivery of maintenance volume in Wessex Outer Delivery Unit.

Electrical and Power (E&P)

CP5 Exit Performance

Much of our DC traction power equipment in the region was originally installed in the 1950s and 1960s and today we are faced with a large volume of equipment (e.g. oil filled cables, HV and DC circuit breakers etc) that is beyond its design life or experiencing obsolescence issues.

Despite E&P assets having had a long period of consistently low investment, overall, the performance of E&P assets has been satisfactory in CP5 except for DC cables connecting to the conductor rail and

signalling power systems. Major failures have been experienced in CP5, resulting in service restrictions that impact our ability to deliver the service aspirations of our customers, together with component failures that leads to localised passenger disruption.

CP6 Strategy

The strategy for CP6 revolves around several key themes:

- Investment to improve electrical safety both on the mainline and in depots.
- Investment in targeted condition-based renewals across the traction power system to mitigate the risk of safety and increased service affecting failures within CP6, and to avoid assets being taken out of service as end of life. Due to funding limitations this work is being based on asset criticality to work towards sustainability targets.
- Investment in signal power assets where we are focusing on reducing the impact of catastrophic incidents through proactive replacement of signalling power cables, improved system architecture and the implementation of improved monitoring equipment.
- Investment in DC contact systems where we are focusing on mitigating increasing failure rates with targeted inventions and new equipment designs to improve reliability.
- Provision of re-active funding to route teams to allow targeted intervention to address new/emerging issues.

The work bank is based on using asset policy interventions – we are planning interventions primarily where we expect equipment to reach end of life or fail within the next 5 years, and where equipment is already running in a degraded mode. Otherwise, funding is provided to repair specific assets on a reactive basis during CP6.

These support our approach to maintenance which will see:

- Implementation of improved isolation arrangements
- Continued implementation of regimes to support the availability and reliability of the wider E&P asset base.
- Development and implementation of new maintenance regimes for signalling power systems
- Development of new tools to support conductor rail maintenance

Kent CP6 Delivery Year 1 and 2

Investment plans have progressed broadly in line with the delivery plan and we are on target to meet our key targets for conductor rail renewal. Other works delivered include; DC Switchgear Renewal, Renewal of M&E equipment at Kingsferry Bridge, Replacement of DC Protection Relays, DC Cable Lug Replacement, Signalling Power Cables renewals and SIN119 remediation works.

We are making steady progress in the roll out of improve isolation facilities with the installation of Negative Short Circuiting Devices (NSCDs) (joint ESD and route funded) and are implementing a methodology agreed with SouthEastern to assess risks in depots that will inform and prioritise the implementation phase which is due to start in Year 3.

In terms of jointly funded enhancements we have seen the implementation of major works at New Cross grid to increase our power supply capacity in this area and removing several life expired assets that formed a critical part of our HV traction network.

Delivery of other work such as the replacement of the AC-DC interface at Dollands Moor will continue into Year 3 alongside the development work for our year 3 to 5 work bank to maximise the co-ordination of our work and to drive efficiencies into the programme.

Sussex CP6 Delivery Year 1 and 2

Investment plans have progressed broadly in line with the delivery plan but we have experienced difficulties with conductor rail renewals in the latter part of Year 2 which is likely to result in a shortfall against the year 2 target, however, this will be recoverable by the end of the control period.

Other works delivered include; Replacement of DC Protection Relays, DC Cable Lug Replacement, DC Cable Replacement, Signalling Power Cables renewals and SIN119 remediation works. In addition, we have completed the implementation of NSCDs (joint ESD and route funded) on the Brighton mainline and are developing the next phase of this programme.

In terms of jointly funded enhancements we have seen the implementation of a TP Hut conversion in the Croydon area to reliably support increased service levels in this area. Development work continues for our year 3 to 5 work bank to maximise the co-ordination of our work and to drive efficiencies into the programme.

Wessex CP6 Delivery Year 1 and 2

Investment plans have progressed broadly in line with the delivery plan, but we have experienced difficulties with conductor rail renewals in Year 1 and there are further risks to achieving declared volume in Year 2. However, we plan that lost volume will be recoverable by the end of the control period.

Other works delivered include: HV Feeder Cable Renewals, UPS Renewals, Signalling Power Cable renewals and other minor renewals. Together the with ongoing implementation of DC switchgear renewals on the Isle of Wight which should be completed by the end of Year 2.

In addition, we continue to make progress with the ESD funded implementation of NSCDs on the route.

Development work continues for our year 3 to 5 work bank to maximise the co-ordination of our work and to drive efficiencies into the programme.

Buildings

CP5 Exit Performance

During CP5, we carried out an accelerated structural assessment programme of our buildings, predominantly stations, that identified extensive footbridge and canopy repair/strengthening interventions needed to mitigate a loss of capacity and address safety and performance risks. We identified across the station portfolio, a general need to address platform and electrical safety in CP6.

CP6 Strategy

Throughout CP6, we will undertake a risk-based maintenance and inspection regime to mitigate for the predicted continued decline in asset condition. We have targeted our highest risk structures for renewal intervention based on asset condition, structural capacity aligned to our high value locations. Examples of prioritised work activity include; major renewal of Waterloo Concourse and Porte Cochere roofs, footbridge strengthening, platform, electrical and canopy safety related interventions. An enhanced planned preventative maintenance programme is aimed at enabling compliance with statutory and regulatory requirements.

Work bank Optimisation

The work bank will be integrated within our track access planning process and wherever possible align to Train Operator commitments at stations. We will look to take advantage of 'Blockades' to reduce the impact on customers and stakeholders. Early development and packaging of works will support efficient delivery. Emerging work will be managed through a robust inspection and prioritisation regime using safety, performance and sustainability measures whist maintaining cost, volume and efficiency targets.

CP6 Delivery Year 1 Kent

Accelerated programmes of work relating to critical lineside buildings, performance improvement and a workforce safety accommodation improvement programme. Our renewals programme has been supported by integrated working with TOCs during station blockades and the implementation of a robust planned preventative maintenance and inspection programme.

In addition to delivering our planned renewals interventions, we exceeded our year 1 volume target through delivery of accelerated renewals in support of Putting Passengers First initiatives to improve safety at stations. Work includes improvements to the platform and train interface, footbridge, canopy repairs

CP6 Delivery Year 2 Kent

Accelerated programmes of work relating to critical lineside buildings, performance improvement and a workforce safety accommodation improvement programme. Our renewals programme has been supported by integrated working with TOCs during station blockades and the implementation of a robust planned preventative maintenance and inspection programme.

In addition to delivering our planned renewals interventions, we are on target to exceed our year 2 volumes by delivering a programme of accelerated renewals in support of Putting Passengers First initiatives to improve safety at stations. Work includes improvements to the platform and train interface, footbridge, canopy repairs.

CP6 Delivery Year 1 Sussex

Accelerated programmes of work relating to critical lineside buildings, performance improvement and a workforce safety accommodation improvement programme. Our renewals programme has been supported by integrated working with TOCs during station blockades and the implementation of a robust planned preventative maintenance and inspection programme.

In addition to delivering our planned renewals interventions, we have exceeded our year 1 volumes through delivery a programme of accelerated renewals in support of Putting Passengers First initiatives to improve safety at stations. Work includes improvements to the platform and train interface, footbridge, canopy repairs and glazing replacement to London Victoria station concourse roof.

CP6 Delivery Year 2 Sussex

Accelerated programmes of work relating to critical lineside buildings, performance improvement and a workforce safety accommodation improvement programme. Our renewals programme has been supported by integrated working with TOCs during station blockades and the implementation of a robust planned preventative maintenance and inspection programme.

In addition to delivering our planned renewals interventions, we have exceeded our year 1 volumes by delivering a programme of accelerated renewals in support of Putting Passengers First initiatives to improve safety at stations. Work includes improvements to the platform and train interface, footbridge, canopy repairs

CP6 Delivery Year 1 Wessex

In year 1 we focused on developing the significant Waterloo station concourse roof scheme, alongside the delivery of smaller projects including re-wiring and re-lighting, and removal of the old Alton Station footbridge, in liaison with local community groups. We also commenced station management activities at Clapham Junction and Guildford, following their revised status as Network Rail 'managed stations' at the end of CP5, and started work on our accommodation strategy to improve conditions for our workforce.

CP6 Delivery Year 2 Wessex

During year 2 we have completed targeted refurbishment, strengthening and repair work at multiple stations during Wessex Blockades. We've undertaken numerous car park renewal schemes at stations to eliminate tripping risks and commenced large station canopy and footbridge renewals projects across the route. Additionally, we delivered a brand new MDU facility for a track team at Feltham, new welfare blocks at Woking MDU and multiple light-touch building refurbishments for the benefit of our staff. Design works continue for the waterloo roof scheme as we move towards GRIP 4 design commencing early in year 3.

Vegetation

CP5 Exit Performance

We still have legacy vegetation assets that previously have not had the necessary focus. We have implemented a create and maintain asset policy to deliver full asset benefit that will address the legacy issues and provide a reduction in performance impacting incidents and balance our biodiversity measure.

<u>CP6 Strategy</u>

A planned intervention strategy that will deliver enhancements to the vegetation assets to both reduce performance and safety risks whilst delivering no net loss in our biodiversity measure.

CP6 Delivery Years 1and 2

Investment plans have progressed in line with our Delivery Plan and we have enhanced vegetation management along 97 miles of lineside. We have implemented a new vegetation strategy that incorporates a sustainable approach that will maintain biodiversity and the ecological environment along our lineside. In consideration to our neighbours, we aim to provide a sustainable lineside that meets the demands of all parties for safety and biodiversity and is sympathetic to our adjacent surroundings.

Telecoms

CP6 Strategy

Our renewal interventions in CP6 target ageing and obsolescent telecommunications equipment and power supplies to support asset sustainability and performance improvement

The introduction of Digital Railway (DR), Automatic Train Operation (ATO), European Train Control System (ETCS) and Traffic Management means that the reliability and resilience of our telecoms network has become even more critical to performance. Our plans for CP6 include additional technical roles and new competencies to support future maintenance and manage performance risk.

Wessex was one of the first routes to introduce GSM-R cab mobile fitment, which took in place 2012 (CP4). Since the end of CP4 continuing through CP5, telecoms asset reliability has continuously improved.

The National Telecoms strategy facilitates improvements to the quality of customer information through the renewal of assets on managed stations and on all TOC managed stations across the three routes. Better customer information supports incident management and management through significant perturbation and provides a very clear indication of our putting passengers first program.

Continuing improvements to GSM-R performance will continue during Y2 and Y3 as the new version of the cab mobile is fully deployed.

Work bank Optimisation

Targeted renewals for ageing and obsolescent telecommunications equipment and power supplies – in particular, station information and surveillance systems, cables, level crossings and some Driver Only Operations (DOO) assets.

CP6 Delivery Year 1 and Year 2

The telecoms programme for delivery is broadly on track with meeting its milestones developments for year 1 and 2, with slight delays in our commercial and procurement bidding process. Scheme development has completed on our managed stations portfolio. Customer Information Systems renewals across the Kent, Sussex and Wessex franchised stations are all in the development stage with surveys ongoing.

Where necessary and driven by asset condition, works on Driver only operation CCTV systems will take place. Some renewals are likely to focussed around maintenance intervention given the previous works carried out on platform structures in recent years. The DOO position is also reviewed with new rolling stock introduction where the equipment is fitted to the train rather than the platform. We will continue with renewal interventions on concentrators and lineside telephony and work in synergy with re-signalling schemes to plan work in the most effective way.

Asset data

CP5 Exit Performance

Asset data is increasingly important to support effective planning and targeted interventions. During CP5, we worked to achieve the 95% data quality target set by the Office of Rail and Road (ORR) in 2017, and data quality will remain a focus in CP6 to drive decision making across the asset lifecycle. We have established an asset data community with maintenance teams to share knowledge and embed new business processes as part of our Asset Data Governance Framework.

CP6 Strategy

Our plans for CP6 support professionalising and making best use of our systems to improve decisions through data, risk and the use of decision support tools. We will improve our operational data management so that delivery plans are targeted to deliver the best balance of performance, safety and risk.

Work bank Optimisation

Professionalising and making best use of the functionality of our systems to improve decisions through data, risk and the use of decision support tools.

CP6 Delivery Years 1 and 2

An asset data and analysis team were implemented to enhance the quality of asset data for innovation.

The critical output of asset data management is the development of the asset data quality improvement plan. We established data management

process and principles with the asset data community and improved the integrity of maintenance scheduled takes.

For asset data analysis, we targeted business problems or opportunities to help the business make better decisions. A data driven asset reliability application was developed in year 1 enabling the region to investigate the repeated asset failures and major incidents systemically.

In year 2 we are actively working more closely together as a Region and integrating the Wessex Capex work bank into the existing Kent and Sussex work bank App.

7.4 Enhancements on the Southern region

While the regulatory settlement determines the funding available for operating, maintaining and renewing the Southern region in CP6, and the outcomes we will deliver, the service we provide to our passengers can also be improved through enhancements to our infrastructure, such as new stations or track layouts, that facilitate developments to the train service. It is essential that our regulatory commitments and proposed changes to the train service are managed in as joined up a way as practically possible.

In contrast to previous control periods, in CP6 enhancements to the network can be introduced at any time. The DfT has established a framework through which investment to improve network capacity improvement will be governed. This is via the Railway Network Enhancement Pipeline (RNEP) (Figure 7-6 RNEP decision stages).

This means that a DfT funded Enhancement is required to go through the three key stages of the Investment Decision Framework before it can progress to the delivery phase. These stages are:

- Decision to Develop
- Decision to Design
- Final Investment Decision

Significant enhancements that are funded from other sources are expected to follow the same process. Only enhancements that have passed the Final Investment Decision point, or have delivery funding confirmed if 3rd party funded, are included in this plan.

The Railway Network Enhancement Pipeline (RNEP) The decision stages





Schemes following this mechanism that have now concluded include:

- Sandwich footbridge and platform extension
- Thameslink and Thameslink Resilience programmes

Schemes which have a Final Investment Decision include:

• SWR depots and stabling

- Enhancements to the Feltham and Wokingham resignalling project
- Southampton Freight Train Lengthening
- Access for All schemes at several stations
- Gatwick Airport station
- Chart Leacon depot
- Denmark Hill station

Southern region is committed to working with the DfT and other funders to promote enhancement investment on our network and we see this as a key contributor to realising future passenger benefits and securing sustainable growth. Discussions have been influenced by the pandemic, as a result of the economic challenges faced by the country and revised future projections of passenger numbers.

The new Programme Management lifecycle PACE is now rolling out across the Region and will support our aim of a more flexible approach and reduced costs for projects, programmes and portfolio.

8 Efficiency

8.1 Context

In Control Period 6, Southern region plans to invest ± 7.2 bn to operate, maintain and renew the railway. This is a substantial sum that we have been entrusted with to enable us to deliver our planned outputs for passengers. Recognising the need to secure value for passengers and taxpayers, we are also aiming to delivery ± 918 m of efficiency over the control period (13 %). This needs to be delivered alongside our other CP6 outcomes. There have been two notable changes to our efficiency plans this year, reflected in our target of ± 918 m described, above:

- The national telecoms accountability and budget has been devolved to the regions along with the telecom's efficiency plans. This amounts to £132m for Southern.
- In response to the pressure on public finances and as part of national arrangements with the DfT, Southern region has agreed to deliver its plan for £33m less and provide an additional £52m of non-cash efficiencies. Detailed plans to achieve this stretch target are not yet in place and will be worked up during as part of the normal business planning process.

In our previous plans, both for Wessex and South East route and for last year for the Southern region, we identified the opportunity devolution offered to do things differently. We are closer to our Capital Delivery partners which helps facilitate collaboration and sharing of best practice and problem solving across the constituent Southern routes. Our Regional Strategic Plan for CP6 sees us delivering a greater volume of work than in CP5 and improving train performance and safety. To be successful, this requires us to be brilliant at the basics, to be creative in our thinking and to be efficient in our delivery.

8.2 The impact of the coronavirus on the efficiency plan

Although our plan allows for headwinds, not always recognised in previous control periods, to provide for factors outside of Network Rail's control, no one foresaw the risk from a global pandemic. However, overall the plan has stood up reasonably well the to the challenges of the coronavirus. This year we remain broadly on track to deliver our target. However, the coronavirus headwinds are anticipated to be in the region of £41m this year. We have had to spend more on cleaning and sanitizing products to keep our workplaces COVID secure; we have spent more on agency staff and publicity at our managed stations to keep our passengers safe; social distancing has meant changes to how we get to work and work on site driving upwards travel and labour costs; and we have seen the notable deferral and rework of Hither Green resignalling from Easter to July 2020. On top of this, the additional workload of managing the pandemic, has also had the secondary effect of reprioritising management effort – ensuing that we could keep the trains running and keeping our people safe. As a result of this, future years' efficiency plans have not had as much focus as would have liked and we also now need to develop plans for the additional £88m of stretch. We are addressing this through our new periodic Efficiency Governance Board and have business-wide efficiency days planned every six months. We remain confident of delivering the overall efficiency programme for year 3, but more work is required for future years to refine the plans.

8.3 Other challenges in year 2

As well as the pandemic, there have been other setbacks and challenges to our efficiency drive in year 2. Unit rates on track and earthworks, particularly emergency works, have been higher than originally planned and we are seeing similar pressure on large metallic structures. Track has been subject to a deep dive to ensure that all the cost drivers were properly understood, and we have formulated a six-point plan that will return us to an efficient rate of delivery for the remainder of the control period. A similar approach is being deployed for earthworks and structures.

8.4 What we will deliver

Over the course of the control period, we will deliver the following level of efficiency in capital expenditure and operating expenditure:

£M	19/20	20/21	21/22	22/23	23/24	TOTAL
Efficiency Operating	36	46	58	64	66	270
Expenditure Capital	42	74	147	209	176	648
Expenditure Total	78	120	205	273	242	918
Efficiency Table 8-1 CP6 Effi	ciencies					

These efficiencies will be delivered to support other outcomes on our scorecard, so that our customers and passengers' benefit, through the reduction in unit costs that enables us to generate better value for money and deliver more for less. As per our original CP6 plans, our focus is to embed a culture that lives and breathes efficiencies, seeks out new opportunities through innovation and deploying new technologies and collaborates with our customers to progress mutually beneficial initiatives.

8.5 Summary strategy and plans

The following chart shows the strategic groupings for the total efficiencies (capital expenditure and operating expenditure) across the control period. Capital expenditure efficiencies are also allocated across

asset types and renewal projects whereas the operating expenditure efficiencies are initiative specific and accordingly inherently simpler to calculate and track.



Table 8-2 CP6 Strategic Efficiency Groupings

8.5.1 Commercial efficiencies

These are expected to generate efficiencies of £227m across the control period. £27m of this is driven by improved value for money from national initiatives managed on our behalf by our central Route Services function, whilst the remainder is driven by regional initiatives. On the capital renewal portfolio, framework contracts are in place for the new control period for most asset types enabling us to plan with more certainty over unit rates and focus on early engagement and contractor involvement. The exception is for major signalling projects where the new contract was put in place later than originally envisaged. Accordingly, the Victoria Phase III resignalling scheme will be let under the existing CP5

framework contract. This is not expected to have a direct impact on our planned efficiencies for signalling.

As part of our regional reorganisation, we have brought our capital and route commercial functions together. We have changed from having three distinct and largely autonomous teams to one regional team with route focused contract management and a single sourcing team working to regional supplier and category management strategies. We are confident that this will bring greater commercial opportunities for our operating expenditure and smaller capital works and, are looking to increase our commercial efficiency target as a key component of achieving our efficiency stretch.

8.5.2 Scope efficiencies

One of the larger initiatives in scope efficiencies relates to the use of rail milling to remove track faults. This prolongs the life of track deferring the requirement for renewal and is being regularly used across the region. Over £9m efficiency will be achieved in year 2 and £40m is expected across the control period from using this technique. Other scope efficiencies arise from value engineering and using new technologies and techniques to extend the life of assets rather than replacing them entirely.

8.5.3 Technology

Technology efficiencies of £112m in the control period include the deployment of Negative Short-Circuiting Devices (NSCDs). This forms part of the national programmes to improve electrical safety for our workforce but also facilitates more productive time in possessions. When fully implemented with remote switching, less time is required to take electrical isolation of the track manually, leaving more productive time in the possession to undertake repairs and maintenance. The Wessex route programme for NSCDs continues to be further advanced than in Kent

and Sussex and so expertise and resource is being shared to help with the overall regional implementation. In Kent and Sussex good use is being made of our Mobile Maintenance Trains. These are engineering trains with large, extendable work areas that allows access to the tracks below providing cover, floodlighting and protection for the workforce from passing trains. These assets are being put to good use prioritising work on rail defects and wet beds, cost-effectively reducing failures affecting train running. Other initiatives include the national Intelligent Infrastructure programme.

8.5.4 Access optimisation

£24m of efficiencies through better use of access are targeted in CP6. The establishment of Southern region, with its own capital delivery capability, is a key enabler of this allowing closer working between our Maintenance and Capital Delivery arms to make the most out of the access that we have. The region is also working closely with our train operator colleagues to look at effective and innovative ways to better deliver works rather than through the traditional weekend works. We continue to work with our operators to establish the best balance of efficient work delivery and disruption to passengers and freight services. This has been seen through the COVID pandemic with the replanning of the Hither Green re-signalling commissioning at short-notice. This is unlikely to have been achieved if we had been carrying normal passenger volumes. At Gatwick Airport the enhancement project was offered the opportunity for an additional platform closure when train service levels were reduced, which has enabled the project to run in advance of its planned programme by delivering work more guickly. Further blockades are planned at Horsham in August 2021 and Haywards Heath in February 2022, with other opportunities being reviewed with cross-industry partners in both the short and longer-term. We will continue to explore further opportunities for blockades and other access optimisation solutions throughout the control period.

8.5.5 Delivery

Delivery efficiencies mainly comprise organisational restructures and Operations initiatives such as optimising the use of the Basingstoke and Three Bridges ROC. In total Delivery efficiencies will contribute £111m towards the overall target. £47m of delivery efficiency derives from our 'right first time' initiatives. This includes wide ranging initiatives across both the capital and opex budgets where the focus is on making processes more effective and getting best value out of our resources. This includes the application of LEAN management techniques, better summer maintenance in preparation for the autumn and winters seasons, utilising our assets better, and driving other income sources by making sure that we correctly charge for all the services we provide. This includes both charging correctly internally, such as to projects, and externally such as full recovery of shared utilities costs at our managed stations.

8.5.6 Work bank planning

Getting things right at the start of a process or activity is a key efficiency component as it helps us to avoid re-planning, changes and abortive costs. This can be seen within our renewals work bank where we aim to fix the scope of our work earlier in the process, avoiding late changes to design. This provides for more stability in the work bank and improves our ability to group similar work together, or plan for works in a specific geographical location, further helping our access optimisation initiative. We issued all remits for all remaining years of the control period to our delivery teams by March 2020 and continue to make good progress with the booking of access and project authorisation providing the basis for a stable work bank.

8.5.7 Other

This category includes a range of initiatives including the Sussex and

Kent property strategy which looks to reduce the cost and maximise the utilisation of our accommodation. In Wessex it also captures benefits expected from the introduction of the new signalling technology at Feltham and the implementation of a stage-gate process for track works designed to eradicate several route specific issues experienced in CP5.

Case Study: Removal of Wessex speed restrictions

Another Wessex initiative in the 'Other' classification is the removal of speed restrictions. This forms one part of the broader Wessex LEAN programme.

In 2018/19 the Wessex route experienced a high level of speed restrictions resulting in disruption to the train service as well as incurring additional rectification costs. A programme of proactive mitigation works started at the beginning of the control period to remove speed restrictions and recover track geometry quicker. This resulted in reducing the number of speed restrictions imposed by 15% against the 2018/19 base assumption, giving rise to an annual saving of £2.2m. The Wessex route for 2020/21 is currently forecasting to have reduced imposed speed restrictions by 20% which is bringing efficiency benefits of £3.0m.



Fig 8-4 Improved alignment at Surbiton Junction post work

Fig 8-3 Significant alignment faults at Surbiton Junction

challenged Network Rail to drive additional benefits that could be reinvested into the network. This amounted to £66m across the control period. In addition to this, a further £85m challenge has been handed to Southern by Network Rail – that is £151m of stretch in our targets. Whilst we are up for the challenge, and believe that our plans are robust enough to meet our year 3 target, there is a further step-up in years 4 and 5 and more work is required to identify all the initiatives that will deliver this. We capture new ideas through our 'efficiency hopper' which seeks out new ideas from across the business and supply chain and will continue to identify opportunities through our governance and business planning processes.



Fig 8-5 Salfords: Work to repair the impact of a landslip

8.5.8 Unallocated

Through the process to agree our original CP6 settlement, the ORR

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9 People

9.1 Context

Our People remain fundamental to the success of our movement to Put Passengers First.

At the very outset of the COVID-19 pandemic we set out our two objectives which would guide all our decision making. The first of these objectives was to do what we could to protect the health and wellbeing of our staff and their families.

When our people looked back at this time, we wanted them to remember how it felt to work in the Southern Region. By making every decision with the individual employee as our first thought, we have delivered on this objective and allowed our Managers to feel real empowerment to think in innovative ways and not always rely on a specific policy or approach.

We were also open with our wider leadership group and invited them to raise concerns and challenge our thinking to make sure that everyone bought into the same vision.

As we look forward, it is only by having the right people, equipped to do their job, who are engaged, cared for and well managed, will we make the Southern Region a Great Place to Work for Everyone

We are therefore going to continue to value and recognise our people's commitment. We are going to reward how our people deliver as well as what they deliver in equal measure. We are going to recruit and develop people with the skills we need for tomorrow and continue to move towards being an organisation that reflects the people who use our services.

Our culture will be one where our people feel safe and secure to bring the whole of themselves to work, they are recognised for the contribution they make to our success, and they feel involved in the decisions our organisation makes.

9.2 What we will deliver

We have worked with the business to deliver a series of Route People Plans which address the issues and business challenges identified within our Routes. These will be updated annually and reviewed on a quarterly basis.

Alongside the route People Plans we are delivering specific, strategic interventions across the whole region around Resourcing and Induction, Inclusion and Diversity, and Leadership Development.

To reflect the COVID-19 pandemic whilst continuing to welcome people to work in our Region, we have moved our 5-day induction programme on-line.

We have a comprehensive training plan and approved budget to allow our people to develop their skills and continue to keep the railway safe for our passengers and freight customers.

In our drive to make the Southern region representative of the people who use our services, we will deliver further interventions around our recruitment and assessment processes. Applicant data will be completely anonymised so that we appoint the very best people from the most diverse applicant pool.

Opening-up our opportunities to all our staff and giving everyone the chance to be promoted on their merits, will bring to life our commitments to inclusion and we will work with our people so that they feel safe and

confident in disclosing their personal data to allow us to get a comprehensive view of the make-up of our business.

Finally, our front-line interventions will make roles at all levels of the organisation engaging and rewarding as well as utilising our highly trained staff in the most efficient ways.

9.2.1 Diversity and inclusion

Our aim is for employees in the Southern region to be representative of the customers we serve.

We will do this by improving our recruitment and appointment processes to increase the diversity of the people who work in Southern Region and make changes to our culture and our accommodation to make the environment people work in more inclusive.

We will provide focused support to all promoted employees but specifically those with protected characteristics, to create an environment where they can be a success. This will include coaching, mentoring and more regular development conversations while they are in the role, but also giving them the skills now that they will need for their next role.

We will continue to review staff turnover and engage with our leavers, particularly those with protected characteristics, to make sure that we have an honest understanding of why people chose to leave. We have already changed our exit interview process to highlight and address any issues with the retention of a diverse workforce.

We will build on the improvements we have made to diversity in our senior roles by taking the feedback from our reverse mentoring program and rolling out mentoring and secondment opportunities to underrepresented groups throughout the business.



Figure 9-1 Network Rail workforce of 20% women by 2020

9.2.2 Recognition and reward

We have launched a co-ordinated scheme of instant, Route and Regional recognition awards. We look forward to growing this scheme and bringing together all the Route winners to a Regional Recognition Ceremony each year to celebrate and share best practice.

To make sure that our compensation package remains both attractive and inclusive, we will carry out formal Salary Disparity exercises to review any gaps which may have arisen over time or any divergence from the agreed pay ranges, especially where these gaps particularly disadvantage employees on gender or ethnicity grounds.

9.2.3 Wellbeing and fatigue management

We care about our people and want them to give their best when they come to work. We are increasing and spotlighting the support available

to all our employees around their own mental wellbeing as well as the advice and guidance available to Managers.

We will build on the work already done to manage fatigue, and our approach will be to address the causes of fatigue which reflect the environments our people work in. This will reinforce to our staff that they are cared about, and we are serious in our commitments to their wellbeing.

We will also continue to listen to our staff and continue to make changes to their accommodation and working environments to make them all great places to work. We will recognise the changes in working patterns and continue to provide safe and secure workspaces for our staff when they need them.



Figure 9-2 Working from home 'The New Normal'

9.2.4 Employee engagement

Where our people have used our 'Your Voice' engagement survey to tell

us what matters to them, we must make use of that insight and we are committed to doing so. In emphasising that action will be taken from the survey we will increase participation as well as overall employee engagement.

To really understand what is driving concerns raised in the survey, we will carry out a series of pulse surveys and work with our colleagues on meaningful, local solutions. Where these solutions roll-up to route or regional issues they will be reviewed and prioritised accordingly.

We will be clear with our staff and link the changes we make to the concerns they raise. We will also be honest about the things that we cannot change or that will take a longer-term approach.



Figure 9-3 Network Rail Inductions successfully taking place on MS Teams

9.2.5 Developing our talent

Our focus on development will be to make sure that every employee has the skills to do their role in a safe and efficient way, and that every manager has the knowledge and the empowerment to create the

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environment for their make employees to succeed.

As mentioned above, this will start with new employees joining the region who will receive a comprehensive induction programme so that they are ready and able to undertake their role in as short a time as possible after their start date.

We are also introducing role-specific induction programmes for specific groups of our staff, starting with our Operative grades.

We will pull together the Talent and Development initiatives across the Routes to have a single, regional approach to managing talent for both junior and senior roles in our business. This approach will be based on our willingness to support staff who wish to progress with their careers and also those who want to be really, really good at the job they are doing today. We will encourage breadth in role as much as progression. This will give us a broader pipeline for talent going forward and make sure that we have a commonly-held view of what we call talent.

We will take the opportunities afforded by the regional structure to move our talent round on a more regular basis to spread both knowledge and experience, making sure this is done in an inclusive way to take account of people's domestic arrangements and other commitments. Working reduced or compressed hours, having caring responsibilities or having any kind of impairment will not be a barrier to succeeding and growing in Southern region.

Building on the success of pilot schemes in Signalling and Telecoms and Signaller Recruitment, we will bring a renewed focus to delivering a Strategic Workforce Plan which addresses the demand for skills we need today but also has a view on the skills we need for the future to continue to drive our culture, our performance and the engagement of all our staff.

All of these interventions will be delivered with a single intent – to make the Southern Region a Great Place to Work for Everyone.



10 Sign off

This document and accompanying templates are owned by the Managing Director Southern Region (MD-R).

Submission of this document indicates confirmation that:

- all appropriate level 1 assurance activities have been undertaken; •
- the MD-R is satisfied with the quality, currency and appropriateness of the content of this document as well as the cost, volume and activity • projections to which it refers;
- the signatories are satisfied that the plan has been assessed as deliverable, subject to the assumptions articulated in Appendix C Key risks • and assumptions.

Authorised by:





John Halsall Managing Director Southern Region

30/04/2021

Peter Austin **Region Finance Director**

30/04/2021

Erones

Sian Thomas **Director Engineering and Asset Management** 30/04/2021

Network Rail

Appendix A Key Assumptions

Ref no.	Area	Торіс	Assumption	Areas of spend impacted (e.g. all Opex, track renewals, all spend etc.)
SOU-A-1	Region	Regional Boundary	The Regional CP6 plan is based on the South East and Wessex Route boundaries as at 31 st March 2019. Any future boundary change will need to be accompanied with appropriate funding adjustment to account for the transfer of assets and operational responsibilities.	All
SOU-A-2	Region	Organisation	Any future change external to the region (e.g. restructuring of the organisation) will be reflected in an equivalent change in costs and budget.	All
SOU-A-3	Region	Digital Railway	Operating costs for incremental Digital Rail commitments, including training, is not included in the Region's CP6 OMR plan. It will be covered by additional funding in CP6.	Орех
SOU-A-4	Region	Weather resilience and climate change	Extreme weather and other force majeure events do not exceed modelled norms upon which the Wessex and South East Routes' Weather Resilience and Climate Change Strategies are based.	CAPEX and OPEX
SOU-A-5	Region	Access	The arrangements for gaining access remain the same as at the time of Final Determination. Current red zone working policy applies, and change may impact costs.	CAPEX and OPEX
SOU-A-6	Region	Access	Delivery of our planned efficiencies relies on the availability of access in CP6. In maintenance it is assumed cyclical maintenance access will be agreed so that heavy and mechanised maintenance (e.g., tamping and grinding) are delivered to minimise degradation.	Asset renewals

Ref no.	Area	Торіс	Assumption	Areas of spend impacted (e.g. all Opex, track renewals, all spend etc.)
SOU-A-7	Region	3rd Party consents	It is assumed that third party consents and permissions can be obtained for works with similar constraints / costs as experienced in CP5. e.g. – access across lands, river bridge span closures, highway closures etc.	Renewals
SOU-A-8	Route	Maintenance - arches	Cost of tenanted arches cladding removal is covered up to £55m in the South East Route plan.	Structures maintenance
SOU -A-9	Region	Rolling stock	There will only be anticipated additional costs from the introduction of new rolling stock or new on-board technology.	All
SOU-A-10	Region	Refranchise	Train Operating Company requirements (e.g. objective outcomes and performance levels) after refranchising and the changes to operator contracts forced by the pandemic, will be the same as at the time of the Final Determination.	CAPEX and OPEX
SOU-A-11	Region	Refranchising	The plan is based on existing franchises and commitments, with no funding allowance for changes to timetables, rolling stock, and infrastructure that could be specified in future franchises.	All
SOU-A-12	Region	Electrical Safety Delivery Funding	Electricity at Work Act compliance will be funded centrally (the region has currently allocated £47m to the installation of NSCDs and other electrical safety equipment).	All
SOU-A-13	Region	Traffic Growth	The CP6 funding position is based on the traffic growth figures (file dated 11th September 2017) provided by the central Asset Management team9.	All

⁹Traff_v41Feb16_420_Pass_Forecast_xCTS_xSG_xYr_Perf_SCR summary.xlsx, Author: Robert Bauling, Date: 11 Sept 2017

Ref no.	Area	Торіс	Assumption	Areas of spend impacted (e.g. all Opex, track renewals, all spend etc.)
SOU-A-14	Region	Market	There will be enough capacity and competitiveness within the supply market to deliver affordable plans.	CAPEX and OPEX
SOU-A-15	Region	Central costs	Central service costs remain at the same level as CP5, or with efficiency applied as forecast in central service devolution.	OPEX
SOU-A-16	Region	Central costs	Compulsory redundancy was not originally expected in CP6 with efficiencies expected to be invested in greater outputs, not Opex savings. Post-covid, this is no longer a certainty and we will need to remain agile in our response to the recovery which may involve redundancy.	OPEX
SOU-A-17	Region	Operational property cost	Additional Managed Stations, planned or proposed, are included in this submission.	CAPEX and OPEX
SOU-A-18	Region	Devolution of services	All devolved central services and roles will have adequate budget provision.	OPEX
SOU-A-19	Route	RAB scope	The Waterloo International Terminal is included in the Route Asset Base and requires heavy maintenance.	CAPEX and OPEX
SOU-A-20	Region	Enhancements	Development funding will be made available for enhancements development work including CP7 development planning for Wimbledon DR and CrossRail2. Committed and Region study enhancements are funded separately and delivered to specified outcomes.	CAPEX
SOU-A-21	Region	Deliverability	Future safety initiatives are fully consulted to assess potential volume impact.	CAPEX and OPEX

Ref no.	Area	Торіс	Assumption	Areas of spend impacted (e.g. all Opex, track renewals, all spend etc.)
SOU-A-23	Region	Security	Budget to achieve compliance with National Security Risk Plan in CP6 are centrally held. Following the impact assessment funds will be disseminated to the Region	CAPEX and OPEX
SOU-A-24	Region	Fatigue	There is no central provision assumed for enabling 12 hour working time; therefore, a provision has been included in the Region's Opex budget.	OPEX
SOU-A-26	Region	Cost	It is assumed that the required outputs of Feltham re-signalling will be achieved for the GRIP4 estimated cost of £177m.	CAPEX
SOU-A-27	Kent and Sussex	Thameslink Implementation - Timetable	The staging through the gradual uplift in the Thameslink Programme facilitated GTR train service frequency has successfully delivered up to 20 trains per hour through the core at certain peak times, resulting in popular improvements in connectivity and levels of service. The next major step up is scheduled for December 2020, to 22 tph in certain peak hours, and all necessary infrastructure has been completed to facilitate this. The key dependency now is on the driver training programme to enable the use of the novel, but now proven, Automatic Train Operation technology, which is required for the operation of a 22tph frequency due to the contribution to regular throughput, aiding reliable delivery of an intensive service. The timing of the step to a 24tph frequency has not yet been established as there are several integrated timetable factors and resource requirements that need to be coordinated and that affect reliable implementation.	Performance and maintenance

Appendix B Income Breakdown

Income				_		-		_		-	
£m in cash prices	19/2	0	20/21	2	1/22	22	2/23	23	8/24	Re	gion
Variable charges (VUC, EAUC)	-	67	- 58	-	71	-	73	-	75	-	343
Stations LTC	-	82	- 75	-	76	-	77	-	79	-	390
EC4T	-	155	- 155	; -	162	-	166	-	170	-	808
Schedule 4 ACS	-	91	- 86	-	86	-	80	-	85	-	428
FTAC	-	241	- 256	; -	283	-	268	-	346	-	1,394
Network Grant (SOMR)	-	1,301	- 1,699) -	1,737	-	1,829	-	1,906	-	8,472
Income from FNPO		-	-		-		-		-		-
Other single till income	-	678	- 148	; -	203	-	255	-	260	-	1,546
Total Turnover within scope of PR18	-	2,615	- 2,477	-	2,618	-	2,749	-	2,921	-	13,380

Appendix C Glossary

AIS	Asset Information Services GR		P Governance of Railway Investment Projects		Putting passengers and freight users first
AMP	Asset Management Plan GSM		Global System for Mobile comms - Railways	PPM	Public Performance Measure
ARL	Arriva Rail London	GTR	Govia Thameslink Railway	PTI	Platform Train Interface
ARS	Automatic Route Setting	GWR	Great Western Railway	QIP	Quality Improvement Plan
ATO	Automatic Train Operation	HAVS	Hand Arm Vibration Syndrome	RAMP	Regional Asset Management Plan
BeST	Behavioural Safety Training	HS1	High-speed line 1	RCM	Remote Condition Monitoring
BTP	British Transport Police	IP	Infrastructure Projects	RM3	Risk Management Maturity Model (3)
CAPEX	Capital Expenditure	JPIC	Joint Performance Improvement Centre	ROC	Rail Operating Centre
CP	Control Period	KICC	Kent Integrated Control Centre	RSSB	Railway Safety and Standards Board
CRI	Composite Reliability Index	LED	Light Emitting Diode	R&D	Research and Development
CRM-P	Consistent Route Measure - Performance	LEWiS	Lineside Early Warning System	SHE	Safety, health and environment
CSI	Composite Sustainability Index	LTIFR	Lost Time Injury Frequency Rate	SIN	Safety Improvement Notice
DC	Direct Current	MMT	Mobile Maintenance Train	SOBC	Strategic Outline Business Case
DEAM	Director, Engineering and Asset Management	MSD	Musculoskeletal Disorders	SPAD	Signals Passed at Danger
DfT	Department for Transport	MSL	Miniature Stop Lights	STE	Safety, Technical and Engineering
DR	Digital Railway	NRHS	Network Rail High Speed	STEM	Science, Technology, Engineering, Maths
ETCS	European Train Control System	NRPS	National Rail Passenger Survey	SWR	South Western Railways
E&P	Electrification & Plant	NRT	Network Rail Telecoms	S&C	Switches and Crossings
FDM-R	Freight Delivery Metric	NSCD	Negative Short-Circuiting Device	S&T	Signalling & Telecoms
FNPO	Freight and National Passenger Operators	NVQ	National Vocational Qualification	TBROC	Three Bridges Rail Operating Centre
FOC	Freight operating company	Opex	Operational Expenditure	TfL	Transport for London
FPM	Financial Performance Measure	ORR	Office of Rail and Road	ТМ	Traffic Management
FWI	Fatality Weighted Injuries	PfMO	Portfolio Management Office	тос	Train operating company
GRAI	Governance, Risk, Assurance and Improvement	PIDD	Passenger Information During Disruption	tph	Trains per hour

Appendix D Stakeholder Engagement

10.1 Our broad range of stakeholders

This year we finalised a review to our approach to stakeholder engagement, implementing a clear methodology and framework for building stakeholder datasets, building capability among employees dealing with stakeholder engagement and building industry reputation in the process.

The performance of the Southern region impacts a diverse range of stakeholders with both competing and common interests. This includes, passengers, local business owners, MPs, local government, parish councils, tourism partners, airports, utility companies, supply chain partners, train operating companies, lineside neighbours, those working in or managing stations and the 7,000 employees across the Southern Region who work tirelessly to keep the railway running.

We recognise that we need to continually invest in these relationships to:

- Build trust and reputation
- Build understanding, commitment, participation and support
- Change behaviour
- Enhance service quality
- Embed best practice
- Ensure customer retention
- Increase staff productivity
- Generate wider reach of messages
- Ensure improvement through feedback
- Facilitate achievement of business outcomes
- Discharge our regulatory requirement

10.2 Building sustainable relationships

As a result, we have continued to build on existing relationships and forge new ones to ensure that we always fully consider and address the priorities and concerns of our stakeholders. We want to be seen as being as easy to engage with, on the side of passengers and freight users and an instinctive industry leader with a workforce that is proud to work for Network Rail.

We will do this by:

- Being open and transparent about the investment Network Rail is delivering and areas for improvement
- Delivering clarity for stakeholders, with efficient and timely responses
- Identify small wins to improve reputation of Network Rail among stakeholders
- Bring stakeholders with us at every step of our future investment of the railway, engaging with them always we're on their side.

We will cement strong collaborative working relationships with all stakeholder groups, understand their views, where possible addressing their needs and leveraging their expertise.

The main stakeholders we consulted with in 2020 included:

- 112 MPs, Westminster Government and Transport Select Committee
- County and local councils;
- Train Operating Companies (TOCs)
- Freight Operating Companies (FOCs)
- Freight customer organisations
- Local Enterprise Partnerships
- Rail Delivery Group
- The wider Network Rail community
- Rail industry bodies
- Southern region employees

- Trade unions
- Supply chain partners
- Transport for London (TfL)
- Transport user groups
- Tourism industry
- Chambers of Commerce and other member organisations
- Major businesses based in the Southern region
- Local businesses along the routes
- Pan London stakeholders from all the above groups

10.3 More focus on wider business relationships

In addition, we have continued to invest a lot of time in deepening our relationships with businesses, schools, third level provides, hospitals, and tourism bodies along the routes within the region ensuring that we can engage with them on a regular basis and contact them easily in times of disruption.

Our goal is to move our stakeholders from a level of awareness to buyingin to our strategic priorities for CP6/CP7 and beyond and provide a commitment to support us and work with us as we work to improve rail travel for passengers across the new Southern Region.

10.4 Upweighting our strategy

Our new stakeholder engagement strategy is providing the governance framework to make sure that our stakeholders are satisfied with our service, and that they feel listened to well engaged and informed. We have continued the process of robustly and consistently mapping the stakeholder footprint in each route and business area. In year 2 of CP6 we have continued to engage regularly with over 1000 stakeholder groups across the Southern region.

We will always provide our stakeholders with a named point of contact within the business, where core interests best align with specific areas within route business management, infrastructure management and operations delivery.

10.5 Our listening exercise

To measure our progress, an external stakeholder audit was conducted in August 2020 to listen to the views of our stakeholders. The feedback received is enabling us to shape our engagement activities and address early on the constructive feedback provided by those who work closely with us. A 67% stakeholder satisfaction score with Network Rail was achieved, a 17% improvement on the baseline stakeholder satisfaction survey in August 2019, demonstrating the tangible improvements we are delivering to our stakeholder service as we ramp up engagement, build trust and develop meaningful relationships with our stakeholders. We have noted some areas of dissatisfaction in our engagement with some stakeholders in the Kent route, which we are addressing.

Stakeholders commended us for our engagement with the community since the introduction of the regional team, noting that notices of line closures and works affecting the area are given earlier with better explanations of its value to customers. They also commented on some outstanding station/line repairs undertaken during recent months.

The areas that we need to improve are regular email updates for passengers on engineering works and more notice around changes to published services. Stakeholders are keen to hear when key publications are issued and would like to hear more information on works taking place across the region. Community rail partnerships are keen for us to develop their relationships with us.

Stakeholders commended us for the improvement in our communications around campaigns but remain eager for us to engage with them and share wider business activities. Many respondents were complimentary of the people they deal with but are frustrated by the systems and complexity of the organisation.

In the national independent Member of Parliament survey undertaken by Populus in Summer 2020 we have achieved a significant improvement in perceptions of MPs since the last round of surveys. Our net favourability score has increased by 28 points and engagement score by 4 points. While still minus for overall favourability this demonstrates a significant improvement in perceptions from this key stakeholder group. This improvement can be attributed to regular engagement and communications throughout the pandemic and a clear route for enquiries.

We have a clear action plan in place to continue to address these perceptions over the coming months, focused around the following areas:

- Drive up engagement with all MP offices to bring levels of favourability up
- Provide more regular briefings to provide clear information about engineering works and how they impact constituents
- Demonstrate responsibility for work delivered, whether that's correspondence replies or out on the front line.
- Better show how our engagement activities have influenced revised priorities and activities

We have continued to issue monthly stakeholder newsletters from the Regional Managing Director as well as dedicated project communications from the stakeholder team and have made good use of virtual engagement tools during the pandemic restrictions as an alternative to face to face meetings.

10.6 Building our network

We have reached out to all MPs, RUGs, and interested parties offering to meet them and present to them on working taking place on their route. In addition, we have continued to work collaboratively with our TOC partners, GTR, Southeastern, SWR, GWR and ARL focusing on improving performance and putting passengers first.

During Year 3 of CP6 we will continue to develop our regional level Customer Relationship Management system, that can be used consistently across all routes to capture customer requirements and engagement such that conversations at any level across the region are aware of all stakeholder interests.

10.7 Full alignment with our business plan

Our stakeholder engagement strategy is aligned to and supports our business plan for CP6 and CP7. Strategic areas for all routes have been captured. Making sure our engagement activity includes working towards at least one of the above priorities will help keep us on track and achieve our CP6 goals. It is also important for our internal departments to be able to access a common set of engagement plans to improve the flow of information between teams to identify and collaborate on common areas of interest.

10.8 Supported by strong governance

We use our Stakeholder Engagement and Communications Board (SECG) to review and sign off our plans, including the Regional Managing Director, Route Directors and with representation from Communications, System Operator, Sponsorship, Business Development and Property teams. This group is committed to the principles set out in Network Rail's Stakeholder Relations Code of Practice (SRCoP):

We are committed to continuously improving our engagement with stakeholders

- We will respond to the needs and opinions of our stakeholders
- We will act fairly and not discriminate
- We will engage effectively on decisions that impact stakeholders
- Our engagement will be proportionate
- We will be transparent in our dealings with stakeholders
- We will provide good quality information to our stakeholders
- We will employ governance over our engagement with stakeholders

Figure 10-1 Stakeholder categorisation summarises our stakeholder categories.

Southern Region Strategic Plan Appendix

Categorisation	List	Categorisation
	Commuters	Train operators
Passengers	Reduced Mobility	train operators
	Leisure	
	Business Passengers	
	Rail User Groups	
	Transport Focus	
Passenger representatives	London Travel Watch	Transport bodie
	Disabled Passenger Groups	
	Campaign Groups (e.g. BML 2)	
	Residents' Associations	
	Lineside neighbours	
	Community Rail Partnerships	Third party fun
	Railway Heritage Trust	
	Heritage Rail	
Community	Sustrans	Business
	Communities – Hospitals, Universities, Schools, Sporting Associations	
	Rights of Way Holders	
	Land Owners	
	British Transport Police	Statutory under
	The Metropolitan Police	
Emergency Services	Police - Kent/E Sussex/W Sussex	
	Fire and rescue - London/Kent/E Sussex/W Sussex	
	Ambulance service - London/Kent/E Sussex/W Sussex	Environment
	MPs	
	Transport Ministers	
	Mayor of London/London Assembly Members	
Political	Local Authority elected members - County Councils/Unitaries/District councils/London boroughs	Tourism Bodies
	Transport Select Committee	
	PAC	Media and Soci
	Southern Rail APPG (included in MPs)	Weula and Soci
	DfT officials	
	Other government departments	
Government	City Hall	Supply Chain
	Local Authority officials - transport/environmental health/planning	Trade Unions
	ICE, APM	
Professional Bodies	CCS	
	CEEQUAL	Partnerships
Regulatory	ORR	
	Contraction of the second s	

Categorisation	List
Train operators	TOCs
	FOCs
	TfL (split out into components)
	Adjacent Infrastructure Managers (i.e. HS1 Ltd)
	Ports
	Airports (Gatwick, London City, Luton)
Transport bodies	Highways England
	RDG
	RSSB
	RAIB
	Transport Security
Third party funders	Potential large investors
	Property developers
	Business Improvement Districts
	Station retailers
	Regional & Sub-Regional Chamber of Commerce bodies
Business	Trade organisations (IOD, London First, FSB, CBI, RIA)
	Lease holders
	Commercial Estate Newco
	Major impacted businesses
Statutory undertakers	Utilities
	Historic England
	Natural England
Environment	National Trust
Environment	Environmental Groups
	National Parks
	Environment Agency
Tourism Bodies	E.g. Brighton Tourism Alliance, Visit Kent
	National broadcast/print/digital
	Local broadcast/print/digital
Media and Social Media	Trade media
	Social Media Influencers
	Infrastructure Projects contractors/sub-contractors
Supply Chain	Works Delivery contractors/sub-contractors
	Other suppliers
Trade Unions	
	Local Enterprise Partnerships
Partnerships	cour energine i di merampa
	Transport for the South East

Figure 10-1 Stakeholder categorisation