Wales Route Strategic Plan

March 2019

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1. Foreword and summary

Foreword by the Route Managing Director

Network Rail recognise that the railway in Wales and the borders plays a critical role in connecting people, business and communities to support regional and national economic growth. As a devolved route business, we operate within the national Network Rail framework and through the System Operator. I am delighted to present our Route's Control Period 6 (CP6) Strategic Business Plan (the Plan). The Plan builds on the transformation of Network Rail that commenced in Control Period 5 (CP5). We will continue to deliver a safe, reliable, affordable and growing railway that better meets the needs of our local customers whilst providing maximum value for taxpayers and our funders.

We are proud of our achievements throughout CP5. We have invested over £900m across the route whilst developing stronger relationships with our customers and key stakeholders including Transport for Wales (TfW). The re-signalling of the North Wales Coast, and the Cardiff area have delivered significant performance improvements whilst unlocking infrastructure capacity. We have worked hard to bring track and train closer together in preparation for the new TfW rail services contract which commenced in October 2018, our plan focuses on four key areas:

Safety: We already have a strong safety record. Today, NR runs the safest railway in Europe and our plan positions us to achieve our ambition to deliver a world-class safety record on a par with those in the construction, oil and gas industries. We will continue to reduce the risk of a train accident through better asset management, targeted investment in vegetation management and fencing and drainage renewal. We also implement traffic management and continue to increase our focus on security threats including cyber security.

We will reduce the risk to the public from level crossings whilst using ALARP (as low as reasonably practicable) principles to target risk reduction in the most efficient way. Our suicide prevention plan will continue to reduce Railway trespass and prevent suicides. We have a commitment to reduce workforce lost time injury rates by 59% over CP6, with a focus on front line leadership and behavioural change using our bespoke Wales route home safe plan. This improvement will make Wales route's leading safety record comparable with the construction industry.

Reliability: Improving the performance of the railway and train capacity are key issues for customers and local stakeholders. Our plan, working in partnership with TfW and the freight operators will achieve a further 3.2% reduction in the number Service Affecting Failures (SAF) in CP6 building on the 25% SAF reduction realised over the last five years. TfW's plans for new and additional rolling stock will bring capacity improvements.

Enhanced maintenance strategies, greater use of remote condition monitoring and a 'predict and prevent' approach will achieve a more resilient railway. Our planned investments include renewing Barmouth viaduct and delivering Phase 2 of the Port Talbot re-signalling scheme. These schemes will also deliver a more reliable railway.

We will work with TfW to run trains to the minute, constantly striving to reach optimal operational reliability through a continuous improvement culture striving for operational excellence.

Affordability: Our plan includes expenditure of £1.6bn (in Cash prices) to operate, maintain and renew the railway. Ensuring CP6 is a success requires a robust plan focused on effective deliverability and cost efficiency. In this plan we will achieve 7% improvement in real term efficiency, offset by headwinds of 3% leading to a gross improvement of 10%.

We will achieve this through smarter working, better planning, more efficient use of the railway and better technology.

We will achieve the optimum life cycle cost balance through ISO 55000 Asset Management techniques

Sustainability: Wales Route is encouraged by the support from the Office or Road and Rail (ORR) to invest further in renewals interventions to improve asset sustainability.

Current forecasting included within our Route Strategic Plan (RSP) in January 2018 suggests that asset sustainability across Wales will diminish by 1.7% through CP6.

To meet the challenge set by the ORR a selection of deliverable renewals packages with a combined value of £44m were developed to improve sustainability within earthworks, drainage, track assets which aligns to the assets highlighted within the draft determination.

Growing Railway: We are forecasting continued growth in the number of commuters over CP6 and investment in capacity improvements undertaken in CP5 has enabled improved journey opportunities to support regional and national economic growth. This, together with planned improvements to be delivered by Transport for Wales, will significantly increase franchise passenger service performance while also accommodating the expected continued long-term growth in demand for rail services across the route.

We welcome these anticipated improvements for passengers across Wales and the borders and expect train performance in CP6 to match the high Public Performance Measures (PPM) experienced in the Valleys today, particularly through the challenging autumn period. We will also continue to work with customers and communities to identify other ways to improve services and present these options to funders. We will encourage contestability in the delivery of projects and welcome challenge to Network Rail's engineering standards.

We anticipate continued growth in the number of commuters over CP6 and investment in capacity improvements undertaken in CP5 has enabled improved journey opportunities to support regional and national economic growth. The new rail services contract and its promised improvements will contribute to improved performance while helping to accommodate the expected continued long-term growth.

We welcome these improvements for passengers. We will also continue to work with customers and communities to identify other ways to improve train services and present these options to funders. We will encourage contestability in the delivery of projects and welcome challenge to Network Rail's engineering standards.

A devolved route within a national framework: As a devolved route, we have the opportunity for close alignment with customers and to bring track and train together in the interest of passengers. We work collaboratively with TfW and our operating partners every day and through more formal channels such as the Route Supervisory Board. This will continue throughout CP6. Network Rail's aim is to be one of Britain's best employers by attracting, developing and retaining great people and creating an environment that allows everybody to reach their full potential. We will continue to make the rail industry more diverse and inclusive; we will reform welfare facilities for frontline staff and tackle mental health and wellbeing.

Our devolved leadership team will continue to be responsible for delivery the Route determination with a scorecard at the centre of ORR regulatory framework. Our joint boards including the Route Supervisory Board are ensuring a close partnership approach while also hold the industry to account through the scorecard.

I am confident that our plan, with the continued support of our stakeholders and dedication of our people, will deliver railway that Wales and the borders can be proud of.

The business is currently in the midst of a strategic review (100-day plan). The outcomes of which may ultimately impact some elements of the business plan. At the present time there remains a level of uncertainty around the outcomes of the review and the likely implementation of them. Therefore, this strategic plan is not based on any 100-day plan outcomes. However, on the completion of the review and the associated action plans; any outcomes that will impact on the overall business plan will be reflected through the change control mechanism.

Bill Kelly, Wales route managing director

Strategic context

Wales Route is of vital importance to the UK
Established in 2011, the Wales Route operates, maintains, and renews the railway infrastructure in Wales and Borders [Appendix C]. Our primary routes are used by passengers on long distance services between Wales, London, Manchester, and Birmingham. Our interurban and commuter routes transport passengers to and from key economic centres. Our rural routes connect low population areas across the region. The Wales Route is also vital for freight, with around 15% of rail freight services across GB starting, ending or crossing our network carrying steel, coal and petrochemicals in South Wales and container traffic between Wales, the Midlands and Southampton.

The CP6 context
In developing our CP6 plans, we have undertaken detailed modelling of asset condition as part of our wider asset management framework. This has indicated that by adopting a risk-based approach and carefully prioritising expenditure, we can sustain current levels of safety and reliability and potentially deliver marginal improvements. However, sustainability in CP6 is expected to experience a slight decline. This is due to the affordability constraints, and we have streamlined our work banks by focusing on refurbishments that extend asset life as opposed to renewals.

Our plans also consider:

- **Changes in asset policy** in areas such as Track, Structures and Off-track.
- **Deferrals from CP5**: Where deferrals are safety and/or performance critical they have been incorporated into CP6 plans
- **Electrification**: Handover of the new assets is scheduled for late 2019. Staff directly responsible for maintaining overhead lines (OHL) and distribution are receiving specific training. Other more general safety and awareness training is being rolled out across the route.
- **Safety, Health and Environment strategies**: in areas such as workforce, public, safety, environment and social performance

Beyond these factors, two events have the potential to significantly impact our plans:

- **Uncertainty on future franchise arrangements:** Welsh Government has procured a new rail service delivery partner which mobilised and assumed the franchise in October 2018. TfW intends to acquire the Core Valley Lines (CVL) which will see the roles and responsibilities of the Wales Route and its lead Train Operating Company (TOC) change. At this point, our working assumption is that operation, maintenance and renewals (OMR) of the CVL remains the responsibility of the Wales Route: As the CVL transformation is only at concept design, the route has produced a CP6 plan that assumes OMR will remain the responsibility of Wales Route. As the concept design evolves, we will work with TfW to understand the impact on the Route and change control our plans.

- **Uncertainty on enhancements**: The Wales Route Study (2016) sets out 14 potential schemes for funders to deliver capacity and connectivity enhancements in CP6. Following the UK Government announcement to cancel electrification from Cardiff to Swansea in June 2017, there are currently no committed enhancements within the Wales Route in CP6.

Any change to these assumptions will impact the outcomes that we can deliver, and a change control mechanism will be required to deal with this.

The enhanced delivery capability of the Route

Another key piece of strategic context is our ongoing programme of work to build the capability of the Wales Route. In part this involves capitalising on Network Rail's wider deepening devolution programme to improve our responsiveness to local issues and increase local accountability. Areas that are now devolved to the route include: finance, human resources, communications, utilities, and contracts and procurement. In addition, based on lessons learned during CP5, we have put in place initiatives to make our delivery strategy in CP6 more robust. These were outlined in our 2017 Corporate Plan and include a culture change programme, training all employees to utilise LEAN tools and leveraging technology such as Remote Condition Monitoring equipment to move towards a "Predict and Prevent" strategy.

Vision and outcomes

In developing our plans for CP6, we have a clear view of what success looks like and the outcomes we are targeting. This is based on a solid understanding of what our customers, stakeholders, and passengers want:

Purpose	To connect people, businesses and communities to enhance the quality of life for all
Role	We provide a safe and reliable services to passengers and freight operators

Vision	A better railway for a better Britain to meet the future needs of our customers
Mission	Delivering a safe, reliable, affordable and growing railway

We recognise the importance of engaging with our customers, stakeholders, and passengers. We hosted two stakeholder events in 2017 to understand priorities for CP6 and further events will be undertaken in early 2019. We have also engaged with Welsh Government to align our plans with TfW's new rail services contract.

We have five strategic themes - safety, customer, people, delivery, and growth -and a clear view of the outcomes we are targeting.

Safety

In CP5 Wales Route has maintained consistently good SHE performance as demonstrated by our key performance indicators (KPIs) and we are forecasting this to continue into CP6. Our workforce lost time injury frequency rate (LTIFR) is a key area of focus. In CP5 we have achieved a 35% reduction. In CP6 we will build on this success and reduce this by more than a further 59% underpinned by managing the health and wellbeing of our staff and developing and embedding a learning culture [A.48]. Our CP6 plans support continued passenger and public risk mitigation and minimising our environmental impact.

Customer

In CP6 we will continue to work with our TOC and Transport Focus on the key issues that are important to our customers.

We are putting our passengers first by focusing on running a safe, punctual, reliable network which provides up to date information and facilities to our passengers. We will be working on joint initiatives with TfW, with continued collaboration in CP6.

People

We are just beginning this journey of transformation, which will see unprecedented change for the people of Wales. Throughout this period, we will engage and motivate our workforce for any challenges ahead. Supporting people development across competencies and capability, we will foster an environment based on mutual trust and understanding, we will develop strong and inspiring leaders who are proud to work for Network Rail in Wales. This in turn will lead to a more engaged stakeholder community that endorses Wales Route as a key employer that supports Welsh jobs, develops apprenticeships and puts the wellbeing of its employees at the heart of everything we do.

Our scorecard aligns to this, measuring employee engagement improvement plans.

Our HR business plan will focus on these key areas; attract, engage, grow, retain.

These key areas will be supported by clear business plans focused on HR disciplines, resourcing, engagement, talent and succession, diversity and Inclusion which will highlight current position and the outcomes across CP6.
Our overarching People Plan clearly aligns to our wider HR strategy and Strategic People Plan, 'Great People, Great Teams'. The 'great people great teams' strategy (Appendix G) sets out a wider shared vision for our people. It demonstrates clearly where we will focus our combined effort to help our people to be at their best, and so deliver their best. By working together with our colleagues across Network Rail towards a set of defined strategic and ambitious outcomes for our people will we achieve our business objectives.

Delivery

Early deliverability reviews have been undertaken with both Infrastructure Projects and the Works Delivery Team to develop effective strategies, with a Level 1 deliverability assessment undertaken in Jan 2019, as detailed in Appendix G.

Works will be targeted at the most appropriate delivery team dependent upon financial value, level of complexity and competency of resource. To facilitate these discussions a cross-asset renewals work bank has been uploaded into a GIS system to enable geographical representation of the current plans and proposed timeframes for activity. In response to the Hansford Review recommendations we have provided a list of activity that could be contested by third parties.

Future development will include continued collaborative strategic planning sessions with deliverers and framework contractors in throughout CP6, with further follow up sessions towards final submission of the strategic business plan and beyond**.**

Growth

The railway in Wales and Borders plays a key role in supporting the economy. Over the last 10 years use of the rail network has continued to grow significantly with almost 50% more passenger journeys made to, from, and within Wales, and forecasts developed in collaboration with the rail industry suggest this growth level will continue to be strong.

In the coming years it is vital to continue to work collaboratively with stakeholders to identify options to deliver future capacity requirements, investigate what opportunities exist to secure investment in the railway and ensuring continued benefits for passengers, communities and the taxpayer.
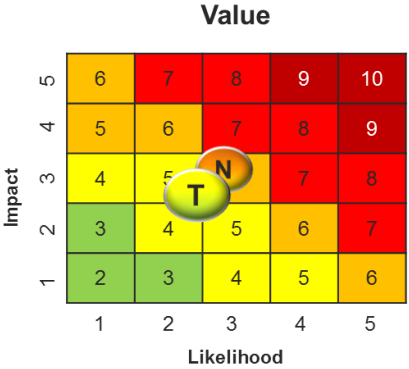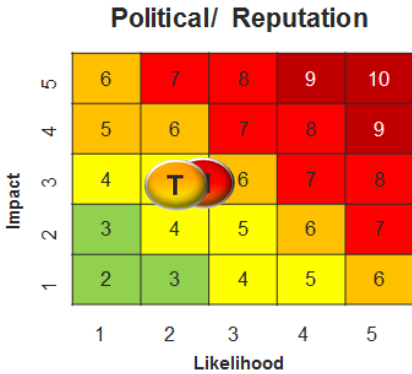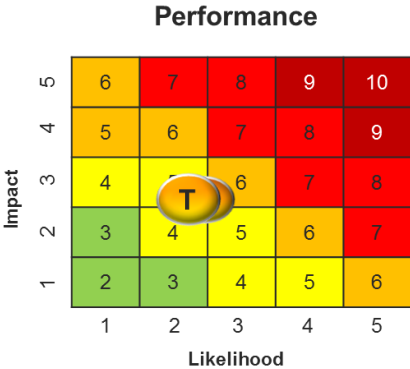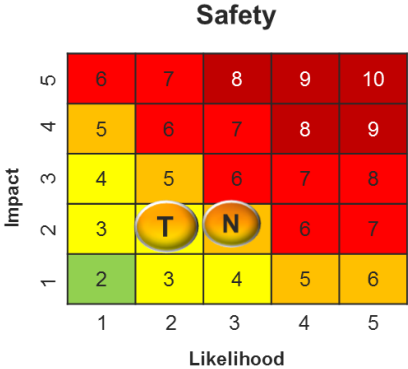
Wales Route – Strategic themes and high level outcomes

Strategic themes | **High level outcomes**

Safety
— We get everyone home safe every day
— We are the safest railway in Europe and maintain our safety certification
— We deliver on our security obligations for the railway
— We minimise our impact on the environment

Customer
— Our stakeholders trust us and our ability to deliver
— Passengers have confidence in the service we provide
— We work collaboratively with our customers to deliver "one railway"

People
— We have strong and inspiring leaders
— Our people have the right skills to deliver both now and in the future
— We have engaged and motivated staff who can grow in their careers
— We are a key Welsh employer
— We celebrate success

Delivery
— We deliver on our plans and targets
— The Wales and Borders railway operation is reliable and punctual
— The railway is efficiently maintained
— Renewals and enhancements are delivered to time, quality and budget

Growth
— Our network supports demand for the railway
— We secure 3rd party funding to grow our network
— We grow our contribution to the Welsh economy

Delivering our mission for our customers a safe, reliable, affordable and growing railway

Each high-level outcome above is supported by detailed key performance indicators (KPIs) included in our route scorecard.

Our route scorecard has been developed in collaboration with our customers to align our measures and objectives. The scorecard has been reviewed at the Route Supervisory Board with an emphasis on tracking measures that best reflect the passenger and end freight users' experiences.

	CP5 (£m)	CP6 (£m)						CP7 (£m)	
	18/19	19/20	20/21	21/22	22/23	23/24	CP6 Total	24/25	25/26
Operations	32	37	41	40	42	44	**203**	44	44
Maintenance	83	83	85	86	86	85	**423**	**85**	**85**
Total Renewals	142	142	208	225	210	138	923	226	226
Digital Railway	-	-	-	-	-	-	-	-	-
Total Renewals + Digital Railway	**142**	**142**	**208**	**225**	**210**	**138**	**923**	226	226
Total expenditure	**252**	**262**	**333**	**350**	**338**	**267**	**1,550**	**355**	**355**

Safety

5	6	7	8	9	10
4	5	6	7	8	9
3	4	5	6	7	8
2	3	T	N	6	7
1	2	3	4	5	6
	1	2	3	4	5

Impact (vertical) / Likelihood (horizontal)

Performance

5	6	7	8	9	10
4	5	6	7	8	9
3	4	T	6	7	8
2	3	4	5	6	7
1	2	3	4	5	6
	1	2	3	4	5

Impact (vertical) / Likelihood (horizontal)

Political/ Reputation

5	6	7	8	9	10
4	5	6	7	8	9
3	4	T	6	7	8
2	3	4	5	6	7
1	2	3	4	5	6
	1	2	3	4	5

Impact (vertical) / Likelihood (horizontal)

Value

5	6	7	8	9	10
4	5	6	7	8	9
3	4	5	N	7	8
2	3	4	5	6	7
1	2	3	4	5	6
	1	2	3	4	5

Impact (vertical) / Likelihood (horizontal)

2. Route objectives

This plan is predicated on the key assumptions laid out in Appendix B and will be impacted as these assumptions change

Route scorecard summary

The long-term balanced scorecard will align our business to deliver against our ambitions and aspirations and reflect stakeholder priorities and needs. During CP5 the industry scorecard formed the basis of monitoring performance by ORR as a precursor to route regulation in CP6.

The scorecard outcomes within this document are deliverable within the funding available.

We have confidence in delivery because we understand how our volumes, costs, and initiatives drive scorecard outcomes. Train performance has been modelled "bottom up" and "top down" by our performance team who have helped establish Wales and Borders as one of the best performing of all NR Routes. Trajectories for safety and asset management measures are also underpinned by modelling and analysis.

Our Asset Managers used a combination of the central 'Technical Authority' forecasts and local evidence to estimate the relative impacts of volume changes, improvement initiatives and external risks.

Developing the scorecard

Our scorecard has been designed to reflect the unique challenges and opportunities across the Wales Route during CP6 and beyond. The measures have been reviewed by the Route Supervisory Board to track passenger and freight end user experiences and align with TfW objectives.

It is based on:

- A thorough understanding of current scorecard results, the reasons for current performance, and a robust view of the forecast CP5 exit position
- A clear view of stakeholder's priorities for improvements
- Activity is aligned to the funding available as announced in the ORR Final Determination
- Detailed work banks and well-developed initiatives
- Robust analysis of headwinds and tailwinds
- A critique of the expertise and capacity to scope and undertake OMR works both within the Wales Route and, crucially, the supply chain
- A robust view of access to the railway.

Metrics, trajectories, trade-offs & achievability

Within the perceived funding available, and as agreed with our stakeholders, we have prioritised safety, operational performance, and customer/ reputation above asset sustainability.

Safety:

Our Strategic Business Plan builds on our achievements in CP5 with continued improvement in the quality of Close Call reporting and timely closure, improvements in Planning and Delivering Safe Work (PDSW) and elements of the Home Safe Plan supported by the inclusion of the risk management maturity model (RM3) key performance indicator (KPI) in our long-term scorecard.

The challenging LTIFR target included within the Wales Route scorecard reflects Network Rail's national aspiration to benchmark itself against other industries who lead on safety. However, the criteria that other such industries use vary from how Network Rail currently measures LTIFR.

As a result, it is recognised that there will need to be a level playing field with which to compare NR's LTIFR, which will require changes to Network Rail's definition of what incidents are counted as LTIs in CP6.

A suitably funded Home Safe Plan developed and implemented by Wales route and safety technical engineering (STE) combined with the activities articulated in our Strategic Business Plan will deliver this step change in organisational culture (these will cover, leadership and culture, management of occupational road risk, fatigue, working environment, planning and delivery of safe work, safer trackside working, manual handling, health and wellbeing).

Wales Route level crossing portfolio is predominantly passive; in CP6 we focus on reducing risk at these crossings with the installation of an overlay system at 52 higher risk locations. A couple of these locations will also see the closure and diversion of 2 crossings to a single location. Level crossing closures are never straight forward and even the simplest closures can end up taking years or not being possible in the end. We have 30 low risk closures planned for CP6; if, after detailed investigation, closure is not possible, alternative risk reduction will be identified for a future control period and interim risk reduction measures implemented where required. We also continue to work collaboratively with local authorities and Highways England to develop closure plans for our more complex public road crossings.

In CP6 this activity will build upon the Wales Route's ongoing commitment

to reduce public and passenger risk associated with level crossings, with further plans being developed for CP7/8.

Train performance: Measures are focused on passenger outcomes, with a move towards *Average Passenger Lateness* and *on time at all recorded stations*. Trajectories are based on detailed modelling and are driven by initiatives associated with signalling, remote condition monitoring, operations that includes incident response and operator improvement. The Freight Delivery Metric has been developed in collaboration with the route and Freight & National Passenger Operators (FNPO).

Customer: The customer metrics is based on feedback from stakeholders with a focus from government, the public and passengers on their perception of Network Rail. Working in collaboration with our stakeholders reflects in a positive way and is a reinforcement for TfW and our new train operator. We continue to work jointly with industry partners to have one voice which helps manage communications and drives down complaints. They also include measures contained within the TfW grant agreement such as tracking passenger satisfaction related to trains and stations along with Service Quality. The route comparison scorecard will also track overall passenger satisfaction and the route is also working with TfW to track periodic measures of Passenger Satisfaction.

People: A suite of internal KPIs will be used to track people performance which extends to our supply chain. The scorecard includes a measure to track delivery against the routes employee engagement action plan. Trajectories have been developed by the Route HR team and reflect our own ambition to deliver a step change in our internal delivery capability by investing in the right skills and capability, so we deliver our mission and vision.

Sustainability and Asset Management: Measures focus on our asset reliability and volume delivery. Asset reliability is anticipated to improve by 3.2% compared to the CP5 exit position due to key re-signalling and level crossing renewals and the benefits of the intelligent infrastructure programme.

Long term forecasting in Appendix F for our submission, projects that sustainability will decline by less than 2% within CP6 as our plans prioritise performance and reliability within the available funding envelope. As set out in Appendix D, additional funding opportunities are included to move towards a sustainable level of activity. We have validated deliverability of asset volumes through close working with partners and the supply chain.

Financial performance: The route will include all other "centrally directed" measures. Determination of achievability has been developed through consultation with key members of the Route that have accountability for the delivery of activities that impact upon KPIs within the route scorecard.

Outperformance: Recent guidance from ORR has required Network Rail to consider how further funding to catch-up with work that has been deferred in CP5 might be prioritised.
We have carefully considered this with stakeholders and have identified a prioritised list of initiatives detailed in Appendix A that would improve performance across our scorecard. In particular:

- Additional funding to reduce level crossing risk
- Additional funding to improve train performance.
- Additional funding to address asset sustainability, providing value for money in the long term by reducing the burden in future control periods.

Regulatory floors: To give greater clarity on the minimum levels of performance and sustainability expected by the regulator (ORR), our plan includes regulatory floors for the key metrics in these areas. These floors, set out in the following table, will act as a level below which ORR would consider undertaking formal investigation for licence breach.

Regulatory floors	19/20	20/21	21/22	22/23	23/24
Consistent Route Measure – Performance (CRM-P)	1.91	1.90	1.86	1.84	1.82
Freight Delivery Metric (FDM-R)	93.5%	93.5%	93.5%	93.5%	93.5%

Long Term Scorecard

Safety	Targets	Weighting	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Lost Time Injury Frequency Rate (LTIFR)	Worse than Target	**5.0%**	0.342	0.291	0.247	0.210	0.179	0.179	0.179	0.179	
	Target		0.326	0.277	0.236	0.200	0.170	0.170	0.170	0.170	
	Better than Target		0.310	0.263	0.224	0.190	0.162	0.162	0.162	0.162	
Risk Management Maturity Model (RM3)	Worse than Target	**5.0%**	6	6	6	6	6	6	6	6	
	Target		8	8	8	8	8	8	8	8	
	Better than Target		10	10	10	10	10	10	10	10	
Train Accident Risk Reduction (TARR)	Worse than Target	**5.0%**	60%	60%	60%	60%	60%	60%	60%	60%	
	Target		80%	80%	80%	80%	80%	80%	80%	80%	
	Better than Target		100%	100%	100%	100%	100%	100%	100%	100%	
Top 10 Milestones to Reduce Level Crossing Risk	Worse than Target	**5.0%**	6	6	6	6	6	6	6	6	
	Target		8	8	8	8	8	8	8	8	
	Better than Target		10	10	10	10	10	10	10	10	

Train Performance	Targets	Weighting	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Consistent Route Measure – Performance (CRM-P) Network Rail Caused Delay Minutes	Worse than Target	5.0%	1.75	1.74	1.71	1.68	1.67	1.67	1.67	1.67	
	Target		1.59	1.58	1.55	1.53	1.52	1.52	1.52	1.52	
	Better than Target		1.43	1.42	1.40	1.38	1.37	1.37	1.37	1.37	
TfW Average Passenger Lateness	Worse than Target	5.0%	3.13	3.13	3.10	3.07	3.04	3.00	2.95	2.90	
	Target		2.85	2.85	2.82	2.79	2.76	2.72	2.68	2.63	
	Better than Target		2.56	2.56	2.54	2.51	2.49	2.45	2.41	2.37	
TfW On Time to 1 across all stations	Worse than Target	0.0%	60.3%	60.7%	61.3%	61.9%	62.5%	62.7%	63.0%	63.3%	
	Target		62.8%	63.2%	63.8%	64.4%	65.0%	65.2%	65.5%	65.8%	
	Better than Target		65.3%	65.7%	66.3%	66.9%	67.5%	67.7%	68.0%	68.3%	
TfW On Time to 3 across all stations	Worse than Target	2.5%	79.6%	80.0%	80.7%	81.3%	81.9%	82.1%	82.3%	82.6%	
	Target		82.1%	82.5%	83.2%	83.8%	84.4%	84.6%	84.8%	85.1%	
	Better than Target		84.6%	85.0%	85.7%	86.3%	86.9%	87.1%	87.3%	87.6%	
TfW Cancellations	Worse than Target	2.5%	2.1%	2.1%	2.1%	2.0%	2.0%	1.9%	1.9%	1.8%	
	Target		2.1%	2.0%	2.0%	2.0%	1.9%	1.9%	1.8%	1.8%	
	Better than Target		2.0%	2.0%	2.0%	1.9%	1.9%	1.8%	1.8%	1.7%	
GWR Cardiff Central Time Loss	Worse than Target	1.0%	32,550	32,235	31,920	31,500	31,185	31,185	31,185	31,185	
	Target		31,000	30,700	30,400	30,000	29,700	29,700	29,700	29,700	
	Better than Target		29,450	29,165	28,880	28,500	28,215	28,215	28,215	28,215	
GWR Wales PPM	Worse than Target	1.0%	67.5%	69.7%	72.2%	75.0%	78.5%	78.5%	78.5%	78.5%	
	Target		72.5%	74.7%	77.2%	80.0%	83.5%	83.5%	83.5%	83.5%	
	Better than Target		77.5%	79.7%	82.2%	85.0%	88.5%	88.5%	88.5%	88.5%	
Cross Country On Time to 1 Departures Cardiff	Worse than Target	1.0%	68.5%	69.5%	70.5%	71.5%	72.5%	72.5%	72.5%	72.5%	
	Target		73.5%	74.5%	75.5%	76.5%	77.5%	77.5%	77.5%	77.5%	
	Better than Target		78.5%	79.5%	80.5%	81.5%	82.5%	82.5%	82.5%	82.5%	
Freight Delivery Metric (FDM-R)	Worse than Target	2.0%	94.3%	94.3%	94.3%	94.3%	94.3%	94.3%	94.3%	94.3%	
	Target		95.1%	95.1%	95.1%	95.1%	95.1%	95.1%	95.1%	95.1%	
	Better than Target		95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	

Locally Driven Customer Measures -	Targets	Weighting	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Passenger Satisfaction – Stations (TfW)	Worse than Target	**2.0%**	63%	65%	68%	71%	71%	72%	72%	73%	
	Target		68%	70%	73%	76%	76%	77%	77%	78%	
	Better than Target		73%	75%	78%	81%	81%	82%	82%	83%	
Passenger Satisfaction – Trains (TfW)	Worse than Target	**0.0%**	64%	66%	68%	69%	71%	72%	74%	76%	
	Target		69%	71%	73%	74%	76%	77%	79%	81%	
	Better than Target		74%	76%	78%	79%	81%	82%	84%	86%	
Service Quality Regime	Worse than Target	**2.0%**	78%	78%	80%	80%	80%	85%	85%	85%	
	Target		88%	88%	90%	90%	90%	95%	95%	95%	
	Better than Target		90%	90%	92%	92%	92%	97%	97%	97%	
Joint Partnership Agreement Milestones	Worse than Target	**5.0%**	80%	80%	80%	80%	80%	80%	80%	80%	
	Target		90%	90%	90%	90%	90%	90%	90%	90%	
	Better than Target		100%	100%	100%	100%	100%	100%	100%	100%	
Stakeholder Perception Survey	Worse than Target	**2.0%**	75%	75%	75%	75%	75%	75%	75%	75%	
	Target		85%	85%	85%	85%	85%	85%	85%	85%	
	Better than Target		95%	95%	95%	95%	95%	95%	95%	95%	
Average Age of Outstanding Public Complaints	Worse than Target	**5.0%**	40	38	36	34	30	30	30	30	
	Target		29	27	25	23	20	20	20	20	
	Better than Target		25	23	21	19	16	16	16	16	
Your Voice Actions	Worse than Target	**2.0%**	80%	80%	80%	80%	80%	80%	80%	80%	
	Target		90%	90%	90%	90%	90%	90%	90%	90%	
	Better than Target		100%	100%	100%	100%	100%	100%	100%	100%	
Freight Growth (Billion Net Tonne Miles)	Worse than Target	**2.0%**	0.60	0.61	0.64	0.67	0.72	0.72	0.72	0.72	
	Target		0.66	0.68	0.71	0.74	0.80	0.80	0.80	0.80	
	Better than Target		0.73	0.74	0.78	0.81	0.88	0.88	0.88	0.88	

Asset Management/Sustainability	Targets	Weighting	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Renewals – 7 Key Volumes	Worse than Target	**5.0%**	90%	90%	90%	90%	90%	90%	90%	90%	
	Target		95%	95%	95%	95%	95%	95%	95%	95%	
	Better than Target		100%	100%	100%	100%	100%	100%	100%	100%	
Composite Reliability Index (CRI)	Worse than Target	**2.5%**	-6.5%	-16.3%	-8.7%	-8.6%	-8.6%	-8.6%	-8.6%	-8.6%	
	Target		-1.5%	-11.3%	-3.7%	-3.6%	-3.6%	-3.6%	-3.6%	-3.6%	
	Better than Target		3.5%	-6.3%	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%	
Composite Sustainability Index (CSI)	Worse than Target	**0.0%**	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	
	Target		-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	
	Better than Target		-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	
Number of Service Affecting Failures (SAF)	Worse than Target	**2.5%**	1,231	1,238	1,213	1,213	1,213	1,213	1,213	1,213	
	Target		1,119	1,125	1,103	1,103	1,103	1,103	1,103	1,103	
	Better than Target		1,007	1,013	993	993	993	993	993	993	
Top Investment Milestones	Worse than Target	**10.0%**	80%	80%	80%	80%	80%	80%	80%	80%	
	Target		90%	90%	90%	90%	90%	90%	90%	90%	
	Better than Target		100%	100%	100%	100%	100%	100%	100%	100%	
Financial Performance	**Targets**	**Weighting**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**Achievability**
Financial Performance Measure (FPM) – Gross Profit & Loss	Worse than Target	**5.0%**	-0.9	-1.3	-1.3	-1.4	-1.5	-1.5	-1.5	-1.5	
	Target		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Better than Target		0.9	1.3	1.3	1.4	1.5	1.5	1.5	1.5	
Financial Performance Measure (FPM) – Gross Renewals	Worse than Target	**5.0%**	-8.5	-12.5	-13.5	-12.6	-8.3	-8.3	-8.3	-8.3	
	Target		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Better than Target		8.5	12.5	13.5	12.6	8.3	8.3	8.3	8.3	
Financial Performance Measure (FPM) – Gross Enhancements	Worse than Target	**5.0%**	-15.7	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	
	Target		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Better than Target		15.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	
Cash Compliance	Worse than Target	**5.0%**									
	Target										
	Better than Target		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Scorecard Stakeholder Endorsement

Wales Route has been developing the long-term scorecard under the direction of the route supervisory board which has involved working closely with industry partners such as Transport Focus, and passenger and freight operator companies that operate within the route. Due to the recent franchise change the Route has collaborated closely with Welsh Government (WG) and Transport for Wales (TfW) to understand and align business objectives.

A representative for TfW has outlined to the ORR the close working relationship experienced with the Wales Route during the production of the Route Strategic Plan, along with the commitment to maintain this strong relationship into the new Wales and Borders franchise.

Through a collaborative exercise with industry partners, the Route Scorecard has been updated so that it includes measures that align more closely with the experience of passengers and freight users.

A summary of the outcomes of this engagement are captured below:

- Customer measures and targets aligned with grant agreement
- Train performance measures shift to passenger focused measures
- Safety targets endorsed at joint route safety board
- Investment, train performance and customer targets endorsed at joint operations governance board
- Long term train performance trajectories require review following joint performance strategy sign-off to inform 20/21 scorecard development

Following endorsement at joint boards the measures and targets are deemed suitable proposals to submit for ORR and NR board review, with further work required to review long term train performance trajectories.

3. Safety

3.1. Safety objectives

Safety		19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Lost Time Injury Frequency Rate (LTIFR)	WORSE THAN TARGET	0.342	0.291	0.247	0.210	0.179	0.179	0.179	0.179	
	TARGET	0.326	0.277	0.236	0.200	0.170	0.170	0.170	0.170	
	BETTER THAN TARGET	0.310	0.263	0.224	0.190	0.162	0.162	0.162	0.162	
Risk Management Maturity Model (RM3)	WORSE THAN TARGET	6	6	6	6	6	6	6	6	
	TARGET	8	8	8	8	8	8	8	8	
	BETTER THAN TARGET	10	10	10	10	10	10	10	10	
Train Accident Risk Reduction (TARR)	WORSE THAN TARGET	60%	60%	60%	60%	60%	60%	60%	60%	
	TARGET	80%	80%	80%	80%	80%	80%	80%	80%	
	BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	100%	100%	
Top 10 Milestones to Reduce Level Crossing Risk	WORSE THAN TARGET	6	6	6	6	6	6	6	6	
	TARGET	8	8	8	8	8	8	8	8	
	BETTER THAN TARGET	10	10	10	10	10	10	10	10	

Key stakeholder priorities	Response
Stakeholders wanted to see more joined-up working with the train operators	Explore opportunities to work more closely with industry partners including TfW and BTP on rail safety including through joint scorecard measures to drive improvement. Joint campaigns around key safety and route crime issues including cable theft, suicide prevention and trespass, passenger safety and level crossing misuse. Continue work on bridge strike reduction given significant safety and performance impact, with a focus on working with hauliers and local authorities across Wales and Borders. Develop a more joined-up approach to community safety issues including work with children and young people.
Improved levels of responsiveness and engagement from Network Rail	Establish targeted multi-agency steering groups to improve engagement and address local issues and emerging themes e.g. animal incursions, vandalism and anti-social behaviour at stations and level crossing misuse hotspots.
Improved information from Network Rail	Stakeholder newsletters to include safety information and updates on safety related activity, quarterly Transport Leaders Forum with a standing safety item on the agenda, twice-yearly stakeholder conferences with safety top of the agenda.

3.2. Safety activity prioritisation and risk outcome

Summary of objectives		Our SHE objectives are: to get everyone home safe every day, to maintain and improve our passenger and public safety performance, and to minimise our impact on the environment.		
No.	Key constraints, risks and opportunities	What we plan to do	Owner	Timescale
1	O: Reduce level crossing risk	Asset management plan in place to continue to risk assess, inspect and maintain existing level crossings. Investment identified to fund targeted closure and upgrade works with options to fund further level crossing risk reductions included within appendix D. Operational risk reduction improvements will be made through the continuation of the risk-based approach to sighting distances and the wider vegetation funding increases	DRAM/HoRSHE	CP6
2	O: Reduce intended or unintended misuse and access to our railway infrastructure	Continue to develop and implement innovative solutions to reduce the risk to passengers and public. Working with industry partners and local communities to efficiently and effectively mitigate risks (including electrification) aligned to risk and train performance impact	HoRSHE	CP5 - CP6
3	O: Improve our management of our environment, sustainability, energy and social performance portfolio	Implement an environment management system (EMS) compliant to ISO140001:2015 and an energy management system (EnMS) aligned to ISO 55000 to enable proactive management of environmental and energy risks and opportunities. Increase our specialist resource to improve our environment, social policy and ecology management in line with legislative requirements and our policies and standards	DRAM/HoRSHE	CP5 - CP6
4	O: Workforce safety – reducing the risk exposure of our workforce	Implement the route SHE strategy. This is structured around 6 key areas: Safety leadership, track worker safety, system safety, risk management and assurance, health and wellbeing and developing a learning culture. Elements that support this include the home safe plan, access point and safe cess planned volumes, close call fund, fatigue risk management funding, mobile welfare provision, driving safely improvements and continued application of the Wales route risk management procedure (The Wales route bespoke home safe plan has been developed initially to cover the following areas that can be added / removed depending on the risk profile during CP6, leadership and culture, management of occupational road risk, fatigue improvement programme, working environment, safer trackside working, planning and delivery of safe work, manual handling and health and wellbeing) and will link into the route SHE strategy.	HoRSHE/COO/DRAM/ SPM (electrification)	CP5 – CP6
5	R: Increase Train accident risk due to re-prioritisation of adverse weather mitigation schemes for more policy aligned interventions	Mitigation is structured around key areas: Route proposal to use seasonal timetables to mitigate adverse weather, an increase in reactive maintenance funding for structures, and improved data quality, increase in identified funding for fencing & drainage, and the use of Intelligent Infrastructure (II) supporting a predict and prevent approach to asset management	DRAM/COO	CP6
6	R: Earthworks failures impact train operations and passenger safety	Increase in CP5 levels of investment for geotechnical and drainage assets in CP6 to maintain tolerable risk profile across the route	DRAM	CP5-CP6

Safety

Political/ Reputation

Summary of risk outcome
The Wales Route net safety output is within the corporate risk appetite.

Improvements in workforce, passenger & public safety and developments in our approach to the environment, sustainability, energy & social performance moving the route from our current position (net) to a forecast (target) position.

3.3. Safety strategy

Wales Route is committed to getting everyone home safe every day. Our workforce is a key part of delivering this outcome for those who work in the industry, our passengers and the public. We have a relatively stable and engaged workforce. This is evidenced by the number of close calls reported exceeding our targets, our positive engagement results through our Your Voice surveys and our "innovative approach and let's fix it attitude" *(ORR Wales Annual Report 2016/17)*.

We recognise that this is the start of a journey to move us to a place where we achieve excellence in health and safety management.

In CP6 we will build on our foundations by not only implementing but embedding the home safe plan. This is supported by the application of the Wales route risk management procedure and the use of RM3 to assess our health and safety management maturity.

Developing our culture and specifically our safety culture is key to delivering safety and performance hand in hand. In CP6 we aspire to a culture in which:

- Our workforce understands and own our H&S risks and controls;
- Reporting and proactive closure of close calls in a blame free environment is business as usual;
- Everyone feels included and contributes to improving their own and others health and safety;
- An accident, incident, near miss, close call and successful delivery are all seen as opportunities to learn and be better every day;
- We seek out and learn from our own and others best practice.

Our corporate plan, SHE strategy and strategic business plan for CP6 support delivery of a maturing safety culture across the route.

Within the Wales route we recognise that we have a responsibility to develop the safety culture of the public who interact with our railway. During CP5 we have developed innovative approaches using the 4e's; education, enabling, engineering and enforcement in partnership with organisations including British Transport Police, our TOCs and FOCs, local communities, Samaritans and other groups. In CP6 we have identified further investment in community safety recognising the importance of this activity particularly in areas where we have electrified the railway. This will enable us to expand our targeted route crime reduction activities and continue to target a reduction suicide within the route.

3.3.1.Specific Safety Improvement Schemes

Through the later stages of CP5 the "Wales route" bespoke home safe plan is being developed to reduce the lost time incident frequency rate (LTIFR) to 0.170 by the end of CP6, the plan will focus of eight key areas as stated below;

a) Safety, leadership and culture
b) Working environment
c) Road & vehicle risk
d) Fatigue improvement programme
e) Planning and delivery of safe work
f) Manual handling
g) Safer trackside working
h) Health and wellbeing

The RM3 risk maturity model will also be used as part of this process and will gauge compliance in line with milestones in relation to the implementation plan to achieve an initial baseline at end of year 1 of CP6 using the works delivery function to establish this milestone before role out across the route.

3.4. Occupational Health & Wellbeing strategy

The occupational health & wellbeing strategy will be aligned to the national plan which includes the following;

Manage the risks to people's health from environmental, physical, psychological, hazards, identifying area of improvement on;

1. Silica dust
2. Vibration (HAVs)
3. Mental health (stress)

Proactively work to protect the workforce sufficiently from health risks:

1. Analysing data and trends (e.g. stress survey, sickness absence, referrals to health services)
2. Preventative initiatives (e.g. regular health campaigns)
3. Professional and timely support services (effectively managing our contracted services OH Assist, Validium and Rehab Works)

Encourage a culture of enablement by:

1. Providing information and support to allow colleagues to look after their own health
2. Creating a supportive culture, whereby we all have a stake in looking out for each other
3. Encouraging collaboration between employer and employee

3.5. Security strategy

Wales route manages a diverse range of assets, some of which, when subject to security issues, can have disruptive and negative impacts to performance, costs, reputation and safety.

We have not developed our own security strategy as we consider it important to align nationally, particularly as some elements are nationally provided or managed such as IT.

Accordingly, we will align our approach with the national strategic security goals as follows:

1. Establish and maintain a safe and secure culture
2. Safeguard our people
3. Reduce the impacts of security incidents
4. Establish and develop clear roles and responsibilities for security
5. Establish systems that provide clear and relevant security information to stakeholders
6. Reduce the cost of security

We will work with the group security function in developing our complementary approach and to support the above goals. This will also enable us to become compliant with the Department for Transport's (DfT) national railways security programme (NRSP).

4. Train performance

4.1. Train performance objectives

Achievability		19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Consistent Route Measure – Performance (CRM-P)	Worse than Target	1.75	1.74	1.71	1.68	1.67	1.67	1.67	1.67	
	Target	1.59	1.58	1.55	1.53	1.52	1.52	1.52	1.52	
	Better than Target	1.43	1.42	1.40	1.38	1.37	1.37	1.37	1.37	
TfW Average Passenger Lateness	Worse than Target	3.13	3.13	3.10	3.07	3.04	3.00	2.95	2.90	
	Target	2.85	2.85	2.82	2.79	2.76	2.72	2.68	2.63	
	Better than Target	2.56	2.56	2.54	2.51	2.49	2.45	2.41	2.37	
TfW On Time to 1 across all stations	Worse than Target	60.3%	60.7%	61.3%	61.9%	62.5%	62.7%	63.0%	63.3%	
	Target	62.8%	63.2%	63.8%	64.4%	65.0%	65.2%	65.5%	65.8%	
	Better than Target	65.3%	65.7%	66.3%	66.9%	67.5%	67.7%	68.0%	68.3%	
TfW On Time to 3 across all stations	Worse than Target	79.6%	80.0%	80.7%	81.3%	81.9%	82.1%	82.3%	82.6%	
	Target	82.1%	82.5%	83.2%	83.8%	84.4%	84.6%	84.8%	85.1%	
	Better than Target	84.6%	85.0%	85.7%	86.3%	86.9%	87.1%	87.3%	87.6%	
TfW Cancellations	Worse than Target	2.1%	2.1%	2.1%	2.0%	2.0%	1.9%	1.9%	1.8%	
	Target	2.1%	2.0%	2.0%	2.0%	1.9%	1.9%	1.8%	1.8%	
	Better than Target	2.0%	2.0%	2.0%	1.9%	1.9%	1.8%	1.8%	1.7%	
GWR Cardiff Central Time Loss	Worse than Target	32,550	32,235	31,920	31,500	31,185	31,185	31,185	31,185	
	Target	31,000	30,700	30,400	30,000	29,700	29,700	29,700	29,700	
	Better than Target	29,450	29,165	28,880	28,500	28,215	28,215	28,215	28,215	
GWR Wales PPM	Worse than Target	67.5%	69.7%	72.2%	75.0%	78.5%	78.5%	78.5%	78.5%	
	Target	72.5%	74.7%	77.2%	80.0%	83.5%	83.5%	83.5%	83.5%	
	Better than Target	77.5%	79.7%	82.2%	85.0%	88.5%	88.5%	88.5%	88.5%	
Cross Country On Time to 1 Departures Cardiff	Worse than Target	68.5%	69.5%	70.5%	71.5%	72.5%	72.5%	72.5%	72.5%	
	Target	73.5%	74.5%	75.5%	76.5%	77.5%	77.5%	77.5%	77.5%	
	Better than Target	78.5%	79.5%	80.5%	81.5%	82.5%	82.5%	82.5%	82.5%	
Freight Delivery Metric (FDM-R)	Worse than Target	94.3%	94.3%	94.3%	94.3%	94.3%	94.3%	94.3%	94.3%	
	Target	95.1%	95.1%	95.1%	95.1%	95.1%	95.1%	95.1%	95.1%	
	Better than Target	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	

Key stakeholder priorities	Response
Reliable and punctual service	Joint performance improvement plans with TfW with a continued focus on performance on morning and afternoon peak. Working with industry partners at a UK wide level through route engagement with national bodies including the rapid action taskforce and the right time railway joint team. Cross industry working on route crime and bridge strike reduction initiatives led by the senior incident officer.
Better connectivity between North and South Wales, East and West Wales	Working with funders, including the UK and Welsh Government, to support aspirations for improving connectivity across Wales and the development of proposals for potential future infrastructure enhancements (through the pipeline approach) and changes to service patterns, including the commitments set out in the new rail services contract.
Faster journey times	Work with TfW to support and help deliver proposals to improve journey times on parts of the network, including ongoing early development work on the north Wales coast Line and Cardiff-Swansea journey time reduction. Continued focus on reducing Temporary Speed restrictions (TSR) across the Wales & Borders network and the closure of level crossings that impact line speed.
Fewer instances of unplanned engineering work	Closer working with industry partners on possession planning. Working jointly to communicate with customers for both planned and unplanned disruption across all channels, and through direct contact with passengers including 'meet the manager sessions' and improved information and engagement at stations. Increased use of predict and prevent measures including remote monitoring of infrastructure to reduce unplanned disruption.

4.2. Train performance activity prioritisation and risk outcome

Summary of objectives	Increase the focus of the route on the end user experience (passenger / freight), prioritising operational effectiveness, robust timetables and a closer alignment with end user demand. Whole system performance trajectories alignment with franchise aspirations.				
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Customers impacted**	**Timescale**
1	**C**: Passenger growth forecast to continue across the network	Operational effectiveness improvement activities increasing visibility of sub-threshold delays at and between stations. Rolling stock strategy	COO	All TOCs	CP5 / Early CP6
2	**R**: Additional train service aspirations across network and interaction with Core Valleys Lines	Assess impact of additional services on train performance to inform industry timetable development decisions	DRS / HoP	All TOCs	Early CP6
3	**O:** Operator performance improvement (Rolling stock strategy, Train crew, Stations delays etc.)	Continued engagement with TfW to obtain their latest assumptions are captured to inform scenario planning	RPD / HoP	All TOCs	CP5 / Early CP6
4	**O:** Performance outputs alignment (metrics, franchise outputs, schedule 8)	Performance reporting, analysis and forecasting shift to passenger focused measures such as on-time across all stations and average passenger lateness. Collaboration with TfW to align performance trajectory with franchise outputs	RPD / HoP	All TOCs	CP5 / Early CP6
5	**O**: Incident and Service management capability	Introduction of traffic management system (TMS) and Senior Incident Officer (SIO) organisation to lead response to incidents and recovery of train service.	COO	All TOCs / FOCs	CP5 / Early CP6

6	**R**: Desired level of renewals funding to mitigate performance risk adequately	Increase in investment into OpEx activities for track, off-track and drainage	DRAM	All TOCs / FOCs	CP6
7	**O**: Vegetation management funding	Additional investment to clear vegetation back to reduce signal and level crossing sighting issues along with reduction in adhesion issues	DRAM	All TOCs / FOCs	CP6
8	**O**: Scheme development sponsor guidelines / modelling capability	Improve investment framework by increasing focus on defining train performance requirements through GRIP along with developing timetable modelling capability	DRS / HoP	All TOCs / FOCs	CP5 / Early CP6

Performance

Political/ Reputation
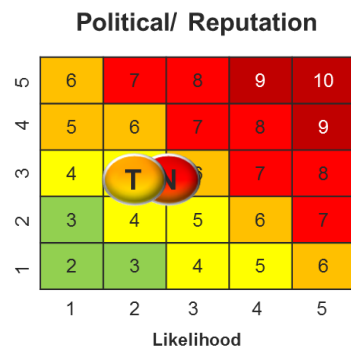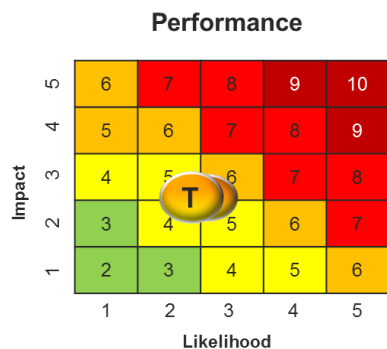
Summary of risk outcome
Assuming no change to current train service levels and operator performance improvements are delivered there is confidence to improve performance throughout CP6. However, we have undertaken scenario planning alongside TfW to quantify the impact of the proposed changes in train service aspirations. This presents a performance risk, but there are also opportunities to mitigate this by a change in rolling stock

4.3. Operational Performance strategy

The train performance strategy will shift emphasis to becoming more focused on passenger experience. Measures will be focused on passenger lateness and improvement activity will be prioritised on key passenger flows. We will continue to work closely with TfW to take a holistic view where train performance outputs are taken into consideration alongside frequency of service and overcrowding measures.

Focusing on line of routes will also lead to increased engagement and accountability of outputs across the network and will be supported by the rollout of continuous improvement techniques focusing on the resilience and delivery of the timetable each day. This will also help inform prioritisation of future enhancement schemes that are aligned with forecast growth in passenger numbers, along with improving poorer performing lines of route. The process of developing enhancement schemes will be improved with clearer guidelines developed for sponsors on how to set performance requirements of schemes and to inform option selection stages of investment process. This will require improved access to performance modelling tools and work will be undertaken to review the existing internal tools available alongside those available by external providers.

The key drivers of the bottom-up forecast are train operator performance improvements and an operations strategy that will deliver benefits through the embedding of a command and control structure, timetable enhancements, on-time railway groups and traffic management technology. There are also improvements due to increased off-track volumes, specifically vegetation clearance which would improve performance during autumn along with a targeted strategy to remove high risk trees. Passenger growth has been factored in as a risk based on a forecast growth of 22% on the Wales and Borders network across the control period. Traffic growth has also been factored in as a risk in the central scenario. This is primarily due to increased traffic levels forecast at the end of CP5 in the LNW route, with limited material change in services assumed within the Wales route. In relation to the great western electrification programme, we are working with the Western route to understand performance impact associated with the development of the IET timetable.

A review of Western and LNW plans indicates alignment of strategies, with an increased focus on operations performance but with no additional improvement or risks forecast related to asset management plans.

Reviewing the train service aspirations with TfW indicates a possible increase of up to 31% in traffic on the Wales and Borders network (circa 14.5% increase in services overall) along with significant increases on the CVL. The impact of the additional services will be factored into the performance trajectory as plans become more developed.

Balanced against this is a forecast benefit from the introduction of new rolling stock, which will likely turn around the declining fleet performance seen in near the end of the control period. Quantification of these benefits will be developed as part of the development of the joint performance strategy, with a link to the new TOC performance metrics of average passenger lateness. At present, the performance strategy is set to deliver a 5% reduction in passenger lateness through CP6.

4.4. Capacity and Timetabling strategy

The new Wales and Borders rail service contract commenced in October 2018, and Network Rail is working work closely with Transport for Wales and all train operators to plan future timetable changes. This will include delivering transformation of services across Wales and Borders as part of the new rail service contract, along with changes driven because of upgrade of the network including electrification between London and Cardiff Central.

During CP6, the Wales system operator team will continue strategic planning activity in conjunction with funders and other stakeholders that will identify the interventions required to accommodate future growth, and the role the railway can plan in connecting communities and in supporting regional and national economic growth. This will build upon the strategy developed in the Welsh route study, published in 2016.

In addition, system operator in Wales has been commissioned by DfT to produce strategic outline business cases (SOBCs) on several schemes across Wales and Borders, which were announced as priorities for rail in Wales by the Secretary of State for Transport in July 2017. The intention of these SOBCs is to inform the decision whether to provide further development funding for each scheme, in accordance with the Rail Network Enhancements Pipeline approach which is now adopted for enhancement funding.
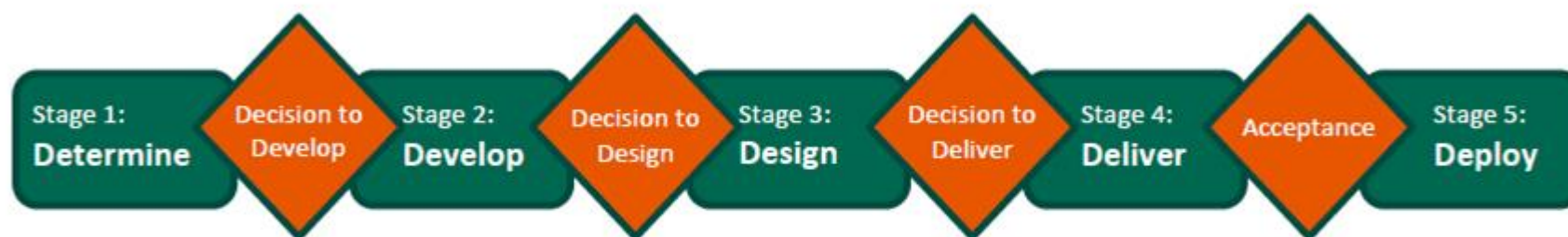
5. Locally driven measures

5.1. Locally driven objectives

As an outcome of the customer engagement the local driven measures have been updated to align closely with the grant agreement targets which focus on improving passenger satisfaction. Transport for Wales (TfW) are developing a mechanism to collate periodic customer satisfaction measures which will provide a better understanding of passenger's satisfaction and will be used to inform the development of the next iteration of the scorecard. Overall passenger satisfaction will be tracked on the route comparison scorecard and will enable benchmarking to other routes.

The route is also in the process of agreeing our Joint partnership plan with TfW, this is a drive towards collaborative working between parties to drive improved levels of customer service, promote cost-effective, safe and efficient ways of operating services and the provision of maintenance and renewal of infrastructure for the route's customers; and the continual improvement of safety. The delivery against this plan will be tracked on the scorecard.

Increased focus has also been given to the time taken to close public complaints which will require new methods of work to be developed. Other local measures include the tracking of the route engagement plans, stakeholder perception and freight growth.

Locally Driven Measures		19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Passenger Satisfaction – Stations (TfW)	WORSE THAN TARGET	63%	65%	68%	71%	71%	72%	72%	73%	
	TARGET	68%	70%	73%	76%	76%	77%	77%	78%	
	BETTER THAN TARGET	73%	75%	78%	81%	81%	82%	82%	83%	
Passenger Satisfaction – Trains (TfW)	WORSE THAN TARGET	64%	66%	68%	69%	71%	72%	74%	76%	
	TARGET	69%	71%	73%	74%	76%	77%	79%	81%	
	BETTER THAN TARGET	74%	76%	78%	79%	81%	82%	84%	86%	
Service Quality Regime	WORSE THAN TARGET	78%	78%	80%	80%	80%	85%	85%	85%	
	TARGET	88%	88%	90%	90%	90%	95%	95%	95%	
	BETTER THAN TARGET	90%	90%	92%	92%	92%	97%	97%	97%	
Joint Partnership Agreement Milestones	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	80%	80%	
	TARGET	90%	90%	90%	90%	90%	90%	90%	90%	
	BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	100%	100%	
Stakeholder Perception Survey	WORSE THAN TARGET	75%	75%	75%	75%	75%	75%	75%	75%	
	TARGET	85%	85%	85%	85%	85%	85%	85%	85%	
	BETTER THAN TARGET	95%	95%	95%	95%	95%	95%	95%	95%	

Average Age of Outstanding Public Complaints	WORSE THAN TARGET	40	38	36	34	30	30	30	30
	TARGET	29	27	25	23	20	20	20	20
	BETTER THAN TARGET	25	23	21	19	16	16	16	16
Your Voice Actions	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	80%	80%
	TARGET	90%	90%	90%	90%	90%	90%	90%	90%
	BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	100%	100%
Freight Growth (Billion Net Tonne Miles)	WORSE THAN TARGET	0.60	0.61	0.64	0.67	0.72	0.72	0.72	0.72
	TARGET	0.66	0.68	0.71	0.74	0.80	0.80	0.80	0.80
	BETTER THAN TARGET	0.73	0.74	0.78	0.81	0.88	0.88	0.88	0.88

Stakeholder priorities have been captured as part of the ongoing engagement with customers.

Key stakeholder priorities	Response
Close track and train working (to be agreed with TfW)	Building on collaborative approach underpinned by joint boards including the route supervisory board, joint communications board, operations governance board and joint access board. Continue the 'one voice' approach to operations and communications as part of our ongoing commitment to work together for the benefit of passengers and our stakeholders.
Consideration for lineside neighbours (to be agreed with TfW)	Focus on reducing the number of railway work complaints through frontline worker behaviour briefings and improvements to pre-notification processes; lineside neighbour engagement including visits and community drop-ins. Implement lean processes designed to resolve more complaints within the 29-day target, as well as reducing the total number of outstanding customer complaints.
Working with industry partners (to be agreed with TfW)	Transport leader's forum bringing senior industry, public and private sector partners together every quarter. Annual independent stakeholder perception audit to measure route reputation, continue annual assembly members survey, stakeholder engagement through regular meetings with single points of contact and clear lines of communication to enable open and consistent dialogue.

5.2. Locally driven objectives activity prioritisation and risk outcome

No.	Key objective drivers (constraints, risks and opportunities)	What we plan to do	Owner	Timescale (start/ finish)
1	O Customer Events	Annual meeting for information sharing and relationship building with our customers	CRE	Now – CP6
2	O Support Category A Events in the capital.	Support TfW with mass transit through Cardiff Central Station by providing command structure and Station Support Volunteers	CRE	Now – CP6
3	O Passenger Information During Disruption: PIDD	Support TfW with customer information during times of perturbation	CRE	Now – CP6
4	O Community Rail [Ref A.24 & A.28]	Assist User Groups/charitable bodies to become custodians of non-operational locations that decreases our maintenance burden and potentially increases customer satisfaction	CRE	Now – CP6
5	O Passenger Satisfaction: Measured through National Passenger Survey conducted twice yearly	Continue to support our lead TOC through actions agreed on the joint action plan	CRE	End of CP5
6	O New Route Scorecard	Continue to support our customer through developing new scorecard measures that align to our customer's needs	CRE	Now – CP6

Political/ Reputation
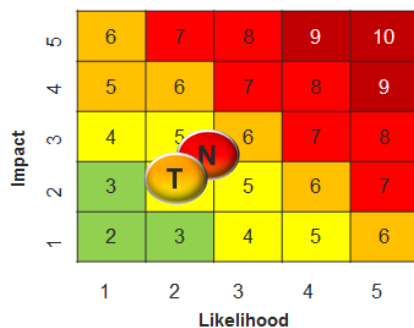
Summary of risk outcome
CP6 brings significant change associated with the TfW franchise. We must manage this effectively and adapt to the changing situation.

6. Sustainability & asset management capability

6.1. Sustainability & asset management capability objectives

Sustainability and Asset Management Capability		19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Renewals – 7 Key Volumes	Worse than Target	90%	90%	90%	90%	90%	90%	90%	90%	
	Target	95%	95%	95%	95%	95%	95%	95%	95%	
	Better than Target	100%	100%	100%	100%	100%	100%	100%	100%	
Composite Reliability Index (CRI)	Worse than Target	-6.5%	-16.3%	-8.7%	-8.6%	-8.6%	-8.6%	-8.6%	-8.6%	
	Target	-1.5%	-11.3%	-3.7%	-3.6%	-3.6%	-3.6%	-3.6%	-3.6%	
	Better than Target	3.5%	-6.3%	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%	
Composite Sustainability Index (CSI)	Worse than Target	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	-1.05%	
	Target	-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	-0.90%	
	Better than Target	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	-0.75%	
Number of Service Affecting Failures (SAF)	Worse than Target	1,231	1,238	1,213	1,213	1,213	1,213	1,213	1,213	
	Target	1,119	1,125	1,103	1,103	1,103	1,103	1,103	1,103	
	Better than Target	1,007	1,013	993	993	993	993	993	993	
Top Investment Milestones	Worse than Target	80%	80%	80%	80%	80%	80%	80%	80%	
	Target	90%	90%	90%	90%	90%	90%	90%	90%	
	Better than Target	100%	100%	100%	100%	100%	100%	100%	100%	

Key stakeholder priorities	Response
Access	Sharing the workbank with planning, delivers and TOC's in advance has enabled the route to set the access availability
Improving reliability	Working across the business to drive down the service affecting failures by targeting hot spots and embracing innovation.
Predict and prevent	The greater use of remote condition monitoring and a 'predict and prevent' approach to asset management

6.2. Sustainability & asset management capability activity prioritisation

Summary of objectives	To maximise the value of the rail infrastructure within Wales and Borders through effective, coordinated activity between the route, its stakeholders, and delivery partners.			
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Timescale**
1	**R**: The governance of asset data is not robust, and therefore there is a risk of uncontrolled manipulation / inclusion of erroneous data sets	The improvement of asset data is a high priority activity within the route for CP5 and through CP6. Currently the asset data governance (ADG) workshops are being undertaken in route which should greatly improve the routes understanding of where data threats are present	RASIM / DRAM	Ongoing CP5 -> CP6
2	**R**: Weather resilience is re-prioritised with core renewal activities leading to an increase in seasonal related service affecting failures	Weather resilience is aligned with policy (earthworks & drainage) and is used in the decision process for all assets. The weather resilience and climate change adaptation (WRCCA) plan exists with the CP5 asset management plans (AMPs) and if further funding is identified additional schemes will be added to this plan to be delivered in CP6. Proposed additional funding is included within appendix D.	RASIM / RAM (GOD) / DRAM	Ongoing CP5 -> CP6
3	**R**: Under delivery of renewals volumes in CP5 leading to a reduction in the route Composite Reliability Index (CRI) and Sustainability Index (CSI) scores leaving assets in a less sustainable / reliable state at the start of CP6	The under delivery of the remaining renewals portfolio is a key route risk which is continually updated through our risk management systems. Regular periodic renewals reviews and change control are in place to maximise delivery.	DRAM	Ongoing throughout CP6.
4	**O**: Improved planning will reduce variation post GRIP stage 3, controlling costs & reduce the risk of project cancelation	The development of the eight-year route strategic plan will enforce a more forward-looking planning process, which should improve the collaboration between the route and its delivers	DRAM / IP / WD	2016- 2024
5	**R**: Asset Management Excellence Model (AMEM) score deteriorates due to constraints enforcing decisions that do not realise the maximum benefits from the routes assets	A move towards certification to ISO55001 at a route level and an increase in training aligned to the asset management role-based competency framework. This will increase the capability in the route to maximise strategic opportunities when and where they arise	RASIM / DRAM	2019 - 2024
6	**O**: No available tools/methodologies for informed system-based decisions for strategic planning & renewal deferrals	The route is pursuing opportunities both externally and internally through enabling better asset knowledge (EBAK) to source these capabilities	RASIM / DRAM	2016 -2024

Value
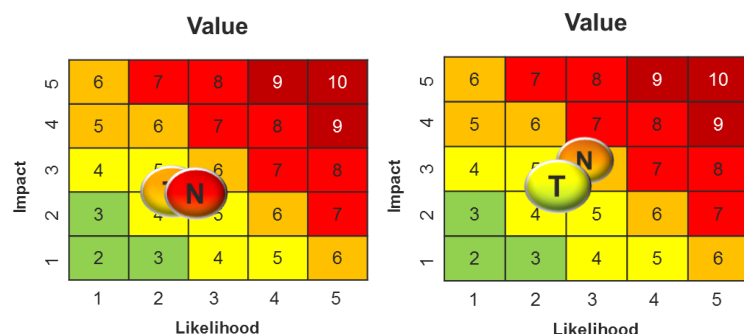
Summary of risk outcome

We aim to maintain asset sustainability and to manage the risk to asset condition within funding constraints. This target will be put at risk if there is a failure to achieve a 'predict and prevent' maintenance strategy with integrated cross functional multi-disciplinary delivery plans. Failure to implement programmes under the Intelligent Infrastructure programme will additionally hamper efforts to maximise the whole life cost of assets through implementation

6.3. Asset by asset key outputs

Asset area	Key outputs
Cross-asset prioritisation and maintenance / renewals balance	Prioritisation of the renewals work bank has been an iterative process throughout the CP6 planning cycle. This process has been undertaken through meetings between the DRSAM and RAM teams to meet budgetary constraints, whilst prioritising the work-bank to meet our stakeholder needs by identifying areas where a reduction in funding would be acceptable. Prioritisation of activity for additional funding is included within appendix D.

An opportunity has been recognised to deliver Port Talbot West Phase 2 (PTW2) signalling renewals more efficiently through track rationalisation. This requires more stakeholder engagement and development to optimise the potential to save money and improve reliability, and as such has not been explicitly recognised within the track cost & volume template. Early indicators suggest a reduction in capital expenditure in CP6 for signalling, and an increase to track expenditure, although both assets will see savings in future control periods. The track RAM is party to these discussions, and is supportive, and has retained flexibility over worksite allocation in YR4 to accommodate this opportunity should it be required. The overall cost to the Wales route will be less than £1m, although this will result in the abandonment of circa 58-point ends representing efficiencies more than £10m for renewals in future control periods. In the context of a constrained budget the route has prioritised safety and performance using a variety of output failure data such as wrong side failures (WSFs), service affecting failures (SAFs), train accident risk, and asset specific reliability outputs. Following this process funding beyond CP5 levels has been directed towards assets where, in some cases, historical under investment has been experienced due to lack of asset knowledge/focus therefore presenting opportunities to make a greater impact upon these discussed outputs.

The Balance of OpEx and CapEx funding between maintenance and renewal has been an asset specific process to maximise the benefits of available expenditure. The activity-based planning tool has been used to understand the implications of the renewals plans upon maintenance volumes and this is represented in our plan. A key adjustment in CP6 is the increase in volumes of track & off-track maintenance activity into address emerging issues as the plan has been in operation during CP5. CapEx expenditure has also been directed in OpEx to invest in activities that will have an indirect benefit to the business, such as:

A social performance fund, the implementation of environmental management system, the implementation of energy management system, managing the compliance risk of welsh environmental legislation, a waste management programme, community safety investment. |
| Track | Through a focused programme of renewal and maintenance activities, the track asset will sustain a steady state asset condition throughout the control period. |

Signalling	The CP6 plan will be a continuation of re-signalling/recontrol along the south Wales mainline towards west Wales and targeted life extension interventions of mid-north Wales mechanical signalling assets. This is to maintain asset condition until provision of ETCS L2.
Level Crossings	In CP6 we will focus on reducing risk at our higher risk passive crossings, removing risk at our lower risk crossings and developing plans for potential closure of our more difficult public road crossings. Active level crossing renewals will be undertaken to replace obsolete or elderly equipment with modern form equivalents integrating improved technology as and when it becomes available.
Structures	The CP6 plan will focus on the major renewal of the timber Barmouth viaduct, this along with an increase in maintenance interventions this will allow the route to touch more of the asset, bringing a wide spread benefit to the asset.
Geotechnical	To deliver our route objectives, the geotechnical asset investment plan will target soil cutting and crest drains to improve asset resilience during adverse and extreme weather events.
Buildings	Targeted interventions will be carried out on key assets across the buildings portfolio to maintain asset condition.
E&P	Complete pump renewals in year 1 at Sudbrook will maintain the availability at its highest possible level and mitigate against an increased risk of severe weather events. Life extension and upgrade to Fuse EPOS will confirm that hot axle box detectors remain reliable and contribute to accident and derailment risk reduction. Significant volumes of Signalling power work including SIN 119 compliance works and wholesale renewal on certain routes will deliver the timebound action plan for Signalling power improvement to the ORR and greater signalling power reliability and availability. The asset management plan for the introduction of electrification is predicated upon a compliant and reliable build that requires minimal capital intervention in the control period. A relatively small sum is included for any works required outside the defect liability period.
ASPRO	The asset protection team will continue to work closely with the sponsorship community to create an environment where third party delivery organisations can meet the aspirations of the open for business programme. Also, the provision a professional and constant approach to all outside party schemes.

Telecoms	The CP6 plan focuses on a programme of renewal and maintenance activities to maintain asset condition, looking to minimise cost and complexity by, transitioning its legacy systems to a single IP telecoms network to improve availability and security, whilst removing end of life assets
Asset data	The continued improvement of the quality and visibility of our data asset to support effective decision making, reduce risk and the delivery of our route objectives.

6.4. Long run forecast.

Details of the long-term forecast are summarised below and included within Appendix E.

Wales budget forecasts (£M, 18/19 prices, average CP6 efficiency)
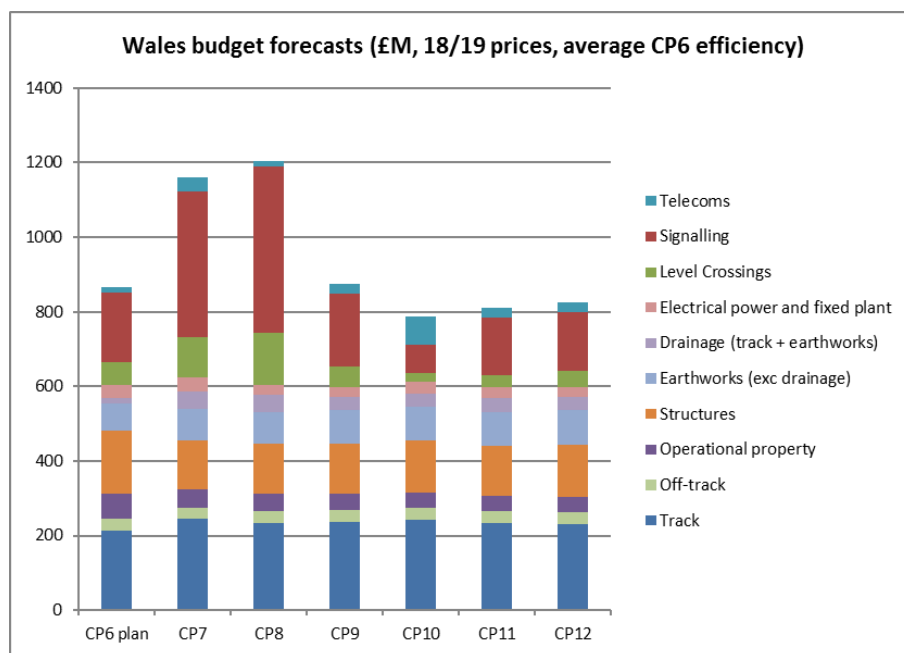
	Renewals budget (£M) (18/19 prices, avg CP6 efficiency & headwinds)						
Asset group	CP6 plan	CP7	CP8	CP9	CP10	CP11	CP12
Track	215	244	233	236	242	234	231
Off-track	31	31	31	31	31	31	31
Drainage (track + earthworks)	14	46	46	36	36	36	36
Earthworks (exc drainage)	71	83	85	89	90	92	94
Structures	170	132	134	136	141	133	139
Operational property	66	49	47	43	42	42	42
Signalling	186	392	444	194	76	155	156
Level Crossings	61	109	139	56	23	31	44
Telecoms	15	38	15	27	77	25	25
Electrical power and fixed plant	36	38	28	27	30	30	27
All assets	**865**	**1162**	**1203**	**875**	**788**	**809**	**824**

N.B.: This information is in 18/19 prices not cash prices, therefore the costs will not align to other numbers within the strategic plan/Databook

Expenditure and implications	Mitigations
The long-term expenditure profile for Wales is fairly flat with the exception of signalling with a spike in CP7 & CP8 from which point expenditure requirements return to approximate CP6 levels. *It should be noted because financial forecasts are only shown against SPS there is no provision for the wholesale refit of Sudbrook pumping station in the next 3-4 control period's. Life extension works in CP5 & 6 will provide asset reliability in the interim*	*Further work will be required to understand the key drivers for the increase in signalling in CP7 / CP8, and if the Digital Railway strategy could ease this projected hump in expenditure.*

6.5. Sustainable Development strategy

We have a challenging 25% reduction in CO_2 for non-traction activities by the end of CP6 (versus CP5 exit) and have conducted bottom up analysis on our assets to identify opportunities to reduce our electricity demand; this has been used to produce our work bank for CP6.

6.6. Technology (R&D) strategy

The Wales Route supports and endorses Network Rail's corporate efforts on a more focused portfolio of research and development schemes in CP6. Investment in these schemes will enable the route to focus upon increased efficiency and reduce the risk to our workforce. We will work closely with Safety Technical and Engineering (STE) to deliver benefits through the successful implementation of these schemes.

The Wales Route strategy is currently in development, although will be aligned to the national strategy. The national R.D&T proposal drives new technical capability across the CP6 plan and is the sole means to fund technical capability that is not available off-the-shelf. The prioritised plan includes:

- Intelligent railway to improve monitoring, analysis and maintenance planning; and automation to speed up and make safer construction, renewals, maintenance and inspection.

- Safe and reliable railway to improve safety and security, reduce the scale of disruption and optimise the timetable.

- Data-enabled railway to share data and realise value from its integration

- Sustainable power to cost-effectively enable non-diesel trains and local energy supply and storage

- Future communications and train control to deliver sustainable asset costs whilst switching to digital technologies to deliver targeted improvements to capacity, train performance and safety.

- Cost-efficient network to reduce the cost of infrastructure renewal, enhancement - such as managing the infrastructure gauge - and construction.

- Continuation of the Shift2Rail programme fulfilling NR's legal commitments until 2024;

- Delivering differently to commercialise R.D&T more successfully, at pace and exploiting 'open for business' principles.

- Develop the RIDCs as a rail testing centre of excellence with university and manufacturing suppliers as partners under UKRRIN.

6.7. Innovation strategy

Wales Route is committed to maximising effectiveness and efficiency through innovation, although a defined strategy has yet to be established. In CP5 there have been several innovations that have been developed within the route to the benefit of our own workforce and passengers including:

1. The Wales Route have developed a bespoke tool to support a coastal and estuarial asset management plan (CEAMP) that captures all the coastal assets and embeds them within a web-based system. The tool allows us to create inspection schedules, work banks for assets and make intervention decisions based upon its condition and vulnerability to coastal processes. It also acts as a repository for current and historical reports.

   We are in the lead with the other routes developing the system with the eventual adoption of a national coastal risk rating (CRR) by Safety Technical and Engineering (STE) as a civils policy requirement, this came about as a direct result of the work pioneered on Wales Route. Several other routes have also either adopted the tool or expressed an interest in its use. This tool has won two Institution of Civil Engineers (ICE) innovation awards.

2. A Wales route innovation to enable heavy welding and grinding equipment to be moved around the depot for servicing, repair and loading onto vans has been a key success in CP5. This was a direct result of the ORR prohibition notice on Network Rail banning moving the frog grinder as a two man lift deeming it a four man lift. The wheels have subsequently been upgraded traverse uneven surfaces and position the kit as close to the track as possible. Geismar were asked to take our concept and create and test to destruction a set of wheels which are the approved final solution.

The key enabler for innovation within the route will be through our continued commitment to LEAN/continuous improved. This will provide our staff with the tools to exploit new ideas for which we have committed £12m in efficiency in CP6.

The route strategy will be aligned to the national strategy which identifies innovation as being critical to delivering value to the Rail industry from all the Research and Development programmes and technology transfer from other industries. The Innovation strategy is designed to support the Industry Rail Technical Strategy Capability Delivery Plan (RTS CDP) with a planning horizon of 30 years.
This framework will deliver a safer, more reliable, efficient and customer friendly railway. The scope includes innovation in products, processes and systems across engineering, finance, commercial, procurement, human resources and sociotechnical systems.

6.8. Asset management capability

Our strategy is for Wales Route Business to be a benchmark against which other routes and external organisations assess their own asset management capabilities. We aim to achieve alignment with ISO55001 within Control Period 6 with a clear demonstrable path towards Level 4 optimising maturity on the ISO55001 scale by the end of the control period.

The key areas for achieving this improvement can be summarised as follows:

Continuous Business Planning. This focuses on understanding the core process for decision making, planning and delivering asset management activities on our infrastructure, developing our capability to a point where we have a single recognised version of the plan in which all asset managers and deliverers have been involved and contributed. The asset management plans have clear ownership, are live, integrated and continuously updated.

We will further develop the required culture, competencies, leadership and organisation through provision of competency tools and training. This will allow a clear map of the skills and capabilities we need in each role, addressing key gaps and enabling succession plans to be put in place.

Asset Information. Our Asset Data Governance improvement plan will deliver a foundation of trusted asset knowledge which will underpin effective decision making. We will develop and improve the capability to analyse asset data and predict when and where intervention is necessary.

Continuous Assurance and Improvement Culture. We will constantly and consistently analyse risks and assure the asset management system such that we develop a common understanding of the overall asset system and interfaces, identify where issues exist, exploit potential opportunities and drive continuous improvement. We will monitor and develop our compliance to legislation such as CDM.

6.9. Specific Sustainability Targeted Investment

- £6.2m across CP6 on energy efficiency / generation

- Improving building energy performance – maintenance delivery units (MDU's) – energy efficient lighting, controls etc.

- Retrofitting REBs with forced air cooling – Replacement of air conditioning as primary cooling.

- Solar photovoltaic cells on suitable buildings including stations

- Enhancement of scheduled MDU upgrades with respect to energy efficiency and generation

- Utilisation of surplus land for renewable energy schemes.

7. Financial performance

7.1. Financial performance objectives

Financial Performance		19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Financial Performance Measure (FPM) – Gross Profit & Loss	WORSE THAN TARGET	-0.9	-1.3	-1.3	-1.4	-1.5	-1.5	-1.5	-1.5	
	TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	BETTER THAN TARGET	0.9	1.3	1.3	1.4	1.5	1.5	1.5	1.5	
Financial Performance Measure (FPM) – Gross Renewals	WORSE THAN TARGET	-8.5	-12.5	-13.5	-12.6	-8.3	-8.3	-8.3	-8.3	
	TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	BETTER THAN TARGET	8.5	12.5	13.5	12.6	8.3	8.3	8.3	8.3	
Financial Performance Measure (FPM) – Gross Enhancements	WORSE THAN TARGET	-15.7	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	
	TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	BETTER THAN TARGET	15.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	
Cash Compliance	WORSE THAN TARGET									
	TARGET									
	BETTER THAN TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Key stakeholder priorities	Response
Deliver value for money for the taxpayer and the public purse	Greater transparency and enhanced communication around project delivery with regular updates to stakeholders on progress against CP6 delivery milestones. Communications to reflect CP6 focus on operations, maintenance and renewals and the new pipeline approach for future rail enhancement schemes. Collaborative working with TFW to consider prioritisation and timing of renewals based on potential passenger performance improvement
Clarity around where money is being invested and why	Local engagement to demonstrate how diverse schemes in CP6 plan reflect local priorities, deliver benefits to passengers at a local level and will improve performance across Wales and Borders. More targeted approach to communications to inform local passengers and stakeholders of work taking place in their area including less visible work that is essential to maintaining a safe and reliable railway e.g. earthworks, track and signalling renewals and vegetation management.

7.2. Financial performance activity prioritisation

Summary of objectives	To provide excellent value for money to the tax-payer through the efficient use of resources to maximise benefits for our stakeholders and passengers				
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Customers impacted**	**Timescale (start/ finish)**
1	**O:** Business Development function to identify potential revenue and capital investment opportunities	Continuing development and implementation of proposals to bring in additional funding to the rail infrastructure in Wales and also revenue generation opportunities to reduce the overall cost of running the existing infrastructure.	Director Sponsorship	All	CP5 – CP6
2	**O:** New Wales and Borders Franchise from 2018 will provide potential for transformational change with a view to build improved collaborative relationships	Work collaboratively alongside the new TOC to achieve synergies where possible and avoid wasted resources renewing infrastructure that is due to be enhanced.	DRAM / Director Sponsorship	All	2018 - CP6
3	**R:** Renewals delivery mechanism	Planning and working collaboratively with all deliverers in a timely manner to enable safe delivery of renewals portfolio and committed efficiencies; both quantifying deliverables and providing alternatives where necessary as information becomes readily available	DRAM / Deliverers	All	CP5 – CP6
4	**R:** Electrification assumptions are inadequate	Monitor the situation throughout early CP6 to allow for a continuous improvement in understanding of Financial requirements. There are robust plans are in place to adequately account for the operational and renewal requirements of Electrification	RFD	All	CP6
5	**R:** Change in funding framework from AME to DEL	Development of a quantitative risk scheduling model for renewals work-banks to allow for controlled over-planning to enable the best utilisation of funding and mitigate the risk of project delay.	DRAM / RFD	All	CP5 – CP6
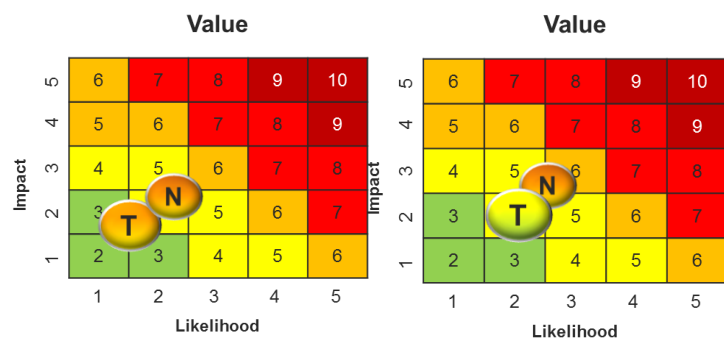
Summary of risk outcome

The key financial risks for CP6 remain with the delivery of the renewals portfolio, alongside the realisation of proposed efficiencies. The risk of under achieving either of the aforementioned, impacts the delivery of the portfolio in its entirety due to work bank prioritisation. Mitigation measures are already under way with work streams quantifying the robustness of required portfolio with both deliverers and supply chain. The plan also includes a Route and Group held Portfolio risk fund to cover potential unknown financial risks, or to increase sustainability if these risks do not realise.

7.3. Financial Sustainability strategy

We are developing a Renewals work-bank quantitative scheduling tool that should be in place before the start of CP6. This tool will give us confidence in the delivery of our future years renewals plans by assessing the maturity and deliverability of key milestones against the GRIP planning process. This will enable us to actively over-plan to match the resources available. We are also further developing forecasting models for Income to enable more accurate planning for variable track access, schedule 8 and schedule 4 aligned to renewals and enhancement planned work.

We continue to conduct the business assurance committee and have significantly improved our risk maturity score over the last 2 years, which demonstrates our ability to recognise and mitigate any risks within our business. This is now also embedded at an operational level and recorded through ARM. We have also developed a business continuity framework, which is currently in the testing phase.

Although there will be challenge and uncertainty due to our new franchise and potential divestment of the core valley lines, we are confident that we have teams in the Wales route who are working with our TOC, TfW, to mitigate financial risk in decisions that are made.

We have been given a route and group risk fund to enable us to mitigate and cover any risk that may occur and continue our investment to deliver a safe sustainable and reliable railway for the funding allowed in the final determination.

8. Activities & expenditure

8.1. Cost and volume summary

This plan is predicated on the key assumptions laid out in **Error! Reference source not found.** b and will be impacted as these assumptions change.

RENEWALS COSTS (post headwinds and efficiencies in Cash prices)

	Unit of Measure	Funded by	CP5 (£m)	CP6 (£m)						CP7 (£m)	
			18/19	19/20	20/21	21/22	22/23	23/24	CP6	24/25	25/26
Track	£m	Renewals	43	50	62	54	59	44	**269**	91	91
Conventional Signalling	£m	Renewals	26	22	60	69	80	38	**269**	51	51
Structures	£m	Renewals	31	29	39	49	36	28	**182**	41	41
Earthworks	£m	Renewals	9	12	12	26	16	10	**77**	18	18
Drainage	£m	Renewals	5	3	3	3	3	3	**16**	3	3
Buildings	£m	Renewals	17	16	21	16	10	9	**72**	14	14
Electrification & Fixed Plant	£m	Renewals	7	10	11	7	5	5	**38**	7	7
Other	£m	Renewals	4	0	0	0	0	0	**0**	0	0
Total Renewals	**£m**	**Renewals**	**142**	**142**	**208**	**225**	**210**	**138**	**923**	**226**	**226**

If needed, we will also have an opportunity to access Route and Group Risk Fund in CP6, particularly for inflation risk. Again, we will ideally spend this on further investment to improve the railway. Route and Group Risk Fund will be controlled through our corporate business planning process. Increased investment will depend on successful delivery of the company's plans and good business cases. The above plan has not been adjusted for the impact of any future divestment proposals laid out by TfW.

KEY VOLUMES

	Unit of Measure	Funded by	CP5	CP6						CP7	
			18/19	19/20	20/21	21/22	22/23	23/24	CP6	24/25	25/26
Plain Line	Linear track Km	Renewals	72.6	71	92	87	88	74	**412**	150	150
S&C	No. of S&C units	Renewals	68	41	33	33	30	19	**156**	101	101
Conventional Signalling	SEU	Renewals	153	0	0	116.89	205.8	143.68	**466.37**	20	20
Digital Railway	SEU	DR Programme	0	0	0	0	0	0	**0**	0	0
Embank/Soil Cut/Rock Cut	No. of	Renewals	463	403	488	519	441	444	**2,295**	472	472
Underbridges	Number of assets intervened on	Renewals	-	13	19	11	7	2	**52**	7	7
Underbridges	m2 plan deck area worked on	Renewals	5,018	5,580	11,994	8,209	4,397	806	**30,986**	4,860	4,860
Wire runs	No. of	Renewals	0	0	0	0	0	0	**0**	0	0
Conductor Rail renewal	Km	Renewals	0	0	0	0	0	0	**0**	0	0

OPEX COSTS (post headwinds and efficiencies in Cash prices)

	CP5 (£m)	CP6 (£m)						CP7 (£m)	
	18/19	19/20	20/21	21/22	22/23	23/24	CP6	24/25	25/26
Track	29	30	30	31	32	32	155	32	32
Off track	6	8	9	10	10	8	45	8	8
S&T	14	14	14	14	15	15	72	15	15
E&P	5	5	6	6	6	6	29	6	6
DU HQ	5	6	6	5	4	4	26	4	4
DU/WD Maintenance excl. B&C	58	64	66	66	67	65	327	65	65
Non DU Maintenance	11	14	14	14	14	14	70	14	14
Civils: Buildings Maintenance	3						-		
Civils: Structures Maintenance	2						-		
Civils: Earthworks Maintenance	0	5	5	5	5	6	27	6	6
Total Maintenance Costs	**75**	**83**	**85**	**86**	**86**	**85**	**424**	**85**	**85**
Operations	32	28	29	30	31	32	151	32	32
Support	8	9	11	10	11	12	52	12	12
Operations & Support Costs	**40**	**37**	**41**	**40**	**42**	**44**	**203**	**44**	**44**
Risk (Centrally-held)		-	8	10	12	11	*41*	*11*	*11*
Risk (Route-controlled)		-	9	15	17	18	*59*	*18*	*18*
Total Controllable Costs	115	120	142	150	157	158	**726**	**132**	**132**
Non-Controllable Costs									
Headcount	1747	1836	1842	1841	1841	1841	1841	1841	1841
Permanent	1747	1	1	1	1	1	**1**		
Agency									

8.2. ENHANCEMENTS

In contrast to previous control periods, in CP6 enhancements can be introduced at any time. A Department for Transport (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 – there are number of projects in this section.
Decision to Design
Final Investment Decision (FID)

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, can be included in the route plans.

Wales has one DfT funded enhancement project, Great Western Electrification (committed elements) which is in Wales as well as Western Route.

8.3. Digital Railway strategy

Digital railway is a rail industry-wide programme, designed to benefit the economy of Great Britain by accelerating the digital enablement of the railway. It could create more capacity on the most congested urban networks, while making trains more reliable, safer and greener and our network far more resilient to disruptions.

The Wales route study have assessed the opportunities for digital railway to address future network capacity constraints, specifically where there may be opportunities to provide outputs in a more affordable and efficient manner if major civil engineering works are not required.

Group digital railway have been focusing on working collaboratively across the rail industry and government to build the investment cases for targeted delivery which addresses key local issues and challenges and finds the appropriate solutions.
Welsh Government and Transport for Wales have been involved in discussions particularly around how digital railway could support the capacity constraints on the core valley lines and in south east Wales.

The new Wales & Borders rail service operator would like to explore the deployment of traffic management on larger portions of the network and the Route will engage positively with this. The replacement of rolling stock will necessitate changes to the ERTMS system deployed on the Cambrian route, and the route will facilitate discussions about the future of the baseline 2 digital signalling currently installed.

An isolated train management system (ARAMIS) is undergoing installation at the Wales route operating centre in preparation for trials to determine the benefits that it could provide. The benefit assessment and lessons learnt will be fed out to the wider digital railway programme for inclusion in future national plans.

Projects initiated in CP6 and beyond will explore opportunities for passive provision i.e. digital railway readiness.

8.4. Telecoms strategy

Network Rail telecoms have developed this telecoms renewals strategy for Wales route as part of the overall Network Rail telecoms national submission, working closely with the Wales route and the TOC through a series of stakeholder engagement meetings. It is focused on the remainder of CP5, CP6 and looks towards CP7 and beyond. Principal points of the renewals business plan:

- Addresses ageing telecoms equipment and power supplies to support assets with earlier fixed telecoms network transmission roll-out
- GSMR signallers HMIs (FTS)
- Reactive minor works budget allowance including spot cable and route renewals
- Level crossing improvements, PETS systems and telephones (including migrations to Network Rail services from 3rd parties to improve performance)
- Telephone concentrators and voice recorders
- Wales route SISS (PA, CIS, CCTV and Help Points)

As part of the NRT CP6 telecoms policy and strategy, NRT through its product and strategy development team will draw experience from subject matter experts to consider the gap between the current state and the future state and to implement improvement activities required to get there. This will be focused on implementing changes to influence the CP6 strategy plan focusing on:

- Operations communications strategy
- Voice strategy including fixed and mobile (GSMR) and corporate voice
- SISS strategy
- Transmission MPLS and IP strategy

Provide support and maintenance to the route in line with the CP6 telecoms policy strategy document, which is looking to minimise cost and complexity by, over time, transitioning its legacy systems to a single IP telecommunications network to improve availability and security, whilst removing end of life assets.

The following points form the stakeholder priorities and therefore the focus for the CP6 telecoms plan:

- Real-time data capture is required to enable the adoption of a predict and prevent strategy
- Condition-based maintenance approach
- The ability to add point of presences as and when required
- Sustained investment required into lineside infrastructure and level crossing
- Operational telephony – greater flexibility, efficiency and resilience
- The migration of legacy services to telecoms infrastructure
- Support the improvement of operational reliability and train performance
- Concerns with amount of life-expired SISS assets, due to delayed renewals
- How does NRT's plan impact on route teams (reactive approach and increased maintenance inspections)?
- Support in improving passenger experience

Further support will be provided to telecoms in the most efficient delivery of its work bank of asset renewals within the route, co-ordinating where applicable with other route renewal activities to provide best value for money and support their aspiration of extending the use of their assets to provide additional benefits to passengers and lineside neighbours.

Use Network Rail telecoms as a delivery partner for those aspects of our other route renewals schemes that require an expert telecoms input.

8.5. Property strategy

The CP6 property strategy includes the following:

- To attract third party investment into the railway and assist with property input to enhance stations
- To undertake Land Strategies by use type or location that will identify operational savings and/ or release land for disposal including residential
- Support the safe and efficient operation of the railway by providing professional property advice
- Work proactively with the Route to understand future operational property requirements for the next 15 years, considering core valley lines divestment, implications of new franchise plans and investments, Metro etc. and longer-term energy and environmental savings to be achieved

- Review the CP6 maintenance delivery unit (MDU) programme to strike a balance between operational need and maximising land value/regeneration opportunities
- Reduce route liabilities

9. Delivery strategy

The starting point for our delivery strategy for CP6 is a considered analysis of the volumes delivered against the proposed CP5 work bank, and the related programming issues that emerged. We have analysed the available information, interrogating in-year performance as well as anticipated outturn from the full five years of CP5. Taking the lessons learned from this analysis, our CP6 delivery strategy for both maintenance and renewals has been developed from extensive consultation with key partners including the Route Asset Management team, Director of Sponsorship, Route Delivery Director and wider management team in IP along with the wider supply chain.

Overview of CP5 lessons

Immaturity of the Wales Route at the time of preparing the CP5 strategic business plan limited the opportunity for well-established work bank preparation which contributed in under-delivery of volumes in Year 1. The Route has since been working to recover from this and even at the end of five years a significant amount of work will have to be deferred. A lack of robust asset data meant that the CP5 volumes were high level estimates for the majority of work banks. This meant that what turned out to be the 'real' delivery programme was not effectively planned. The route also struggled to achieve supply chain management efficiencies that should have been derived had the underlying plan been robust.

The legacy of pushing back the Year 1 CP5 work banks because of poor planning has included:
- Inefficient use of access;
- Reduced productivity;
- Concentrating supply chain activity into a shorter programme duration thereby giving rise to issues of capacity.

Year 1 issues also put additional pressures on the route as we had to re-profile work banks, reschedule activities and understand a new critical path for effective programme delivery.

A further issue encountered was that in certain areas, the route has been unable to exercise sufficient controls over the end to end value chain to guarantee effective delivery. An example is High Output Track Renewal - a nationally led delivery function which has a particularly sensitive value chain.

9.1. Summary route deliverability statement

Large proportions of this submission represent similar or slightly reduced volume when compared to CP5. Although track access opportunity is anticipated to be reduced east of Cardiff on the South Wales mainline due to Electrification, this reduction in access has been accounted for in this operations, maintenance and renewals submission.

Early deliverability reviews have been undertaken with both Infrastructure Projects and the Works Delivery Team to develop effective strategies, with a Level 1 deliverability assessment undertaken in August 2017, which is detailed in Appendix G. Works will be targeted at the most appropriate delivery team dependent upon financial value, level of complexity and competency of resource. To facilitate these discussions a cross-asset renewals work bank has been uploaded into a GIS system to enable geographical representation of the current plans and proposed timeframes for activity.

In January 2018 a cross disciplinary meeting including Asset management. A follow up meeting was held in In January 2019 with RAMs & Delivery teams to focus on year 1 + 2 delivery. Access Planning and Route Services were held to review the overall CP6 renewals work bank. This review interrogated the criticality of activities and flexibility for movement within the control period in line with access availability.

This meeting has identified geographically where key schemes are, and what the access availability is like in these areas. Schemes that have been identified as being flexible within the control period can now be planned around these key schemes to start to formulate the delivery plan for the route. In more rural routes it has been decided that line of route campaigns will maximise efficiency, and in these areas, there will be a sponsorship lead identified to oversee the multi-asset delivery following integration of the work banks in these areas.

Future development will include collaborative strategic planning sessions with deliverers and framework contractors towards final SBP. The opportunity will be to optimise the available access by aligning asset interventions and efficiency benefits of multi-asset renewal activity as part of multifunctional projects. Working closely with our supply chain will provide the platform to capture successes we have had in previous control periods as well as areas to improve. This will support our efficiency challenge with credible initiatives and minimise unproven proposals.

Visualisation of work banks and use of systems such as GRV will improve planning of works and alignment of resource with our work bank.

To demonstrate this collaborative approach each of the key deliverers for the Wales Route has provided deliverability statements that are included alongside the level 1 deliverability assessment within appendix G of this report.

9.2. Planning a Better Network strategy

We are working with TFW to maximise the opportunity to build a strong case for substantial engineering possessions to be incorporated into the plan. Any agreed increase in access to the railway infrastructure throughout CP6 will enable the route to deliver far more for the available funding and tackle some of the more challenging issues within the route such as the effective management of vegetation within rural lines.

The working assumption is that there will be no loss of engineering access because of the new franchise. New electrification assets present a reduction in available working time within possessions (due to isolation requirements) which has been accounted for in activity based plan for maintenance activity, and headwinds for renewals.

As discussed in the previous section is access planning is ongoing within the route to maximise the safety, productivity and efficiency of disruptive access in CP6.

9.3. Project Delivery (IP) strategy
Track

The suppliers for the track capital expenditure programme are both internal and external to the Wales Route. They include Infrastructure Projects Track (IP Track) and Works Delivery (WD).

IP Track will specialise in the larger scale and high complexity works for the route covering Plain Line, High Output and S&C Renewals. This includes the Development works (GRIP1-3) on behalf of the Wales RAM Track team.

The WD team will specialise in the lower complexity and single component renewal that forms part of the capital expenditure programme. They will supplement their workforce with the maintenance DU teams to undertake works such as re-padding and 1 in 3 re-sleepering.

Off-track
Internal Wales route Works Delivery teams will undertake refurbishment/renewal/new build work relating to drainage, level crossing surfaces, access points (including RRAPS), this follows on from the development of this team in CP5. Fencing will be delivered through our framework contractors managed by Works Delivery to the required standards.

Signalling
Delivery of major projects will be undertaken by IP Wales as standalone schemes or as a continuation of existing projects e.g. Port Talbot West (Phase 2) extends from phase 1. There may be opportunities to effectively sub-contract work to the maintenance CapEx team, but this must be carefully managed to not impact delivery of their own core requirements. Minor works will generally be undertaken by Works Delivery.

Level crossing renewals will be delivered by IP either as standalone or localised bundled renewals or as part of larger schemes where efficiencies can be made by joint possessions. Spot renewal of assets will continue under the current regime of delivery unit management

E&P
Current CP5 strategy is to use IP Crossrail & Western to deliver the portfolio as they are accepted as having Electrification and Plant (E&P) engineering specialism. Portfolios of work are to be combined to make commercially interesting packages that give an opportunity to reduce overheads. In CP6 the intention is to place delivery with IP Wales in line with the devolution model to generate efficiencies.

The IP Wales team have recently grown an experienced team of E&P professionals who are currently engaged on development of the CP6 portfolio. Some of the work will be directly remitted to Works Delivery Wales where appropriate.

Buildings & Civils
Currently, all CP6 Buildings schemes are proposed to be delivered by Wales Route Works Delivery, except for Swansea Platform 4 due to scale and complexity. Works Delivery will utilise framework contractors, bidding for schemes under a competitive tender process.

Delivery of major structures and standalone renewals schemes will be undertaken by IP Wales. Maintenance works will be delivered by Works Delivery.

Earthworks & Drainage planned renewals / emergency works & large campaign style refurbishments will be delivered by IP Wales who will engage at least one specialist geotechnical contractor under a new Framework. Works Delivery will undertake refurbishment work and remote condition monitoring installations. Track drainage to align with Track renewals.

In CP6 we will be placing an additional planned preventative maintenance gang in Shrewsbury DU to supplement the existing one established in early 2017 which is based in Machynlleth. The gang will be required to predominantly undertake vegetation management and drainage maintenance with work items identified by the earthworks RAM Team and the Off-Track team via scheduled tasks (MST's) in Ellipse. Cardiff DU has two PPM gangs undertaking this type of work since 2015. It provides a mechanism to combine geotechnical, drainage, and general "Off-Track" work and deliver it in the most efficient way.

Closer alignment of the structure's asset management and Works Delivery teams to progress the pro-active maintenance approach initiated in CP5. The Network Rail design group will develop to provide greater technical support, working closer with the Route to develop and design both renewals and maintenance schemes which will offer additional efficiencies over what they provide in CP5.

New contract strategies will be developed to target common work streams to improve speed of delivery, quality and reduce costs.

9.3.1. Access

The early sharing of workbanks between the RAM teams, IP and Planning teams has meant that the route is more prepared, with workbanks and access availability directly aligning into the first half of the control period. In some cases, work has been planned around available access and, in many cases, the TOCs have been engaged in the plan so that urgent work can be undertaken within the required timeframes.

9.3.2.Supply chain capability

Track

Infrastructure Projects (IP) Track is currently assessing their delivery contract based around the intended volume the Wales Route want to contract through the intended Plain Line (PL) /Switches and Crossings(S&C), Alliance (being implemented in CP6) and the High Output Alliance. The PL/S&C Alliance is likely to cover multiple routes following the similar model of the S&C South Alliance that covers six routes.

Works Delivery recognises the need to strengthen its team to satisfy 'GRIP4Track' 'Engineering Management for Projects' and 'CDM2015' requirements. Based on these factors and recent outturn in CP5, it has presented higher unit rates for CP6.

Maintenance have built bottom-up volumes for CP6 using the 'Activity Based Planning Tool', this provides a base for tighter control, better informed decision making, as well as the granularity to see the cause and effect of varying maintenance strategies.

Challenges for the route in CP6 are:

1. Recording and making use of asset information to reduce risk.
2. Development of Works Delivery's use of GRIP4Track.
3. Tracking and understanding WDs unit rates to assure value for money vs IP Track.
4. Work with the deliverers to develop an efficient method for conventional ballast renewal with the sleepers and rail in-situ, particularly through S&C.
5. Working with other routes to gain economies of scale whilst ensuring the right size solution for Wales.

Signalling

Over the last five years, the number of suppliers for major signalling projects & level crossing renewals has reduced. This is mainly due to mergers, but a few suppliers have moved away from the signalling arena. The reliance on a reduced number of suppliers within CP5 has hindered the opportunity to plan for renewals as resources may be utilised over several projects.

Within CP6 there is an industry wide expectation that more suppliers will come into the marketplace and this will have a benefit upon our plans within the control period.

This improved diversity in the marketplace will assist in meeting the challenges for the supply chain in CP6 to:

1. Deliver renewal projects within agreed signalling equivalent unit rates
2. Provide an effective method of bringing new technology through the approval process such that it can be deployed more swiftly
3. Provide an efficient method of project delivery that allows for delivery away from the traditional holiday breaks which creates peaks of demand for scarce resources e.g. testers

Major contributors to signalling renewals cost in CP5 to overcome are:

1. Data preparation for layouts which requires specialist resource.
2. Lack of suitable possession availability due to delivery 'bottlenecks' which can cause a project to be extended
3. Increasing costs of level crossing renewals

E&P

In CP6 the E&P renewals portfolio will be transferred to IP Wales. We are currently working on a development budget with the IP Wales team during CP5 to facilitate this smoothly. Current deliverability assessment undertaken by IP Wales suggests that the plan is deliverable to programme and budget.

Off-Track

The RAM Team have held discussions with the Contracts & Procurement (C&P) team with respect to the supply chain. It is considered that there is sufficient Contractor/sub-Contractor resource to deliver drainage and fencing volume. However, there will be a step change in vegetation management typified by large scale tree/vegetation removal.

Earthworks

The low complex work required, combined with a primary focus on refurbishment and maintenance type interventions is considered to comprise straightforward, generally small-scale work. Due to this there are anticipated to be sufficient suppliers to meet the demands of the Geotechnical work bank. Notwithstanding this, the large Civils Projects in the area (M4 Relief Road and Hinkley Point) are expected to impact market forces by way of inflating costs rather than the ability to deliver. Whilst there will be an increase in the use of Remote Condition Monitoring to manage risk, this is not considered to be an issue to the supply chain with several suppliers able to meet the demand.

Structures

The Route Contracts & Procurement team are engaging with lower tier suppliers to provide specialist services. This offers an efficiency opportunity to the present use of Tier 1 suppliers who frequently sub-contract to the specialist Tier 2 suppliers.

Buildings

Buildings renewals will be delivered by framework contractors who will bid for works via competitive tender. The framework contractors are a mixture of national and local contractors, who in turn, utilise local and national subcontractors. Many contractors operate in multiple markets; therefore, railway works are subject to market fluctuations in the wider construction industry.

Civils Examinations

CEFA delivery issues have been experienced throughout the CP5 national contract. Our strategy for CP6 is to contract with multiple specialist suppliers to enable a broader choice and flexibility of delivery, whilst still maintaining access to the national contract.

9.4. Contestability

Network Rail's response to the Hansford Review committed Network Rail to publishing a "pipeline of opportunities for third parties" by the end of 2017, including "opportunities for activities to be directly competed in the market". To assist with this process Wales Route has identified a high-level selection of opportunities to the value of £23.1m that could be considered to meet the criteria for contestability.

Track / Signalling

At the time of writing there are no schemes that meet the criteria for contestability for Track and Signalling renewals.

Structures

£1.7m of CERDs renewals and £0.75m footbridge have been identified as potential schemes that could be considered for Contestability.

Buildings

£5.5m of Maintenance Delivery Unit (MDU) renewals, £2m of light maintenance depot renewals and £6.1m of energy and carbon reduction schemes have been identified as potential schemes that could be considered for Contestability.

E&P

£2.3m of Switchgear renewals, £0.47m of water tank renewals, £3.1m in points heating renewals, £0.1m of level crossing lighting renewals and £0.7m of DNO renewals have been identified as potential schemes that could be considered for Contestability.

Geotechnical, Off track and Drainage

£0.42m of soil cutting crest drainage schemes have been identified as potential schemes that could be considered for contestability.

This is an early assessment of the Wales route work bank to the end of CP6. As our understanding of the work develops, it is anticipated that more schemes will be identified for selection for contestability.

9.5. Works Delivery capability

Since the beginning of CP5, the Wales Route works delivery function has grown and capability to deliver an increased work bank, representing a 200% increased spend in year 5 compared to year 1. The Works Delivery function is now set for CP6, planning to deliver £60m per year across the full range of assets, managed by the Works Delivery Route Programme Director, Programme Managers for Track and Signalling south, Track and Signalling north and the Programme Manager for Buildings & Civils Wales.

The track, off track, drainage and signalling work is delivered through direct internal labour, supported by contingent labour as the work level demands. Currently the Buildings and Civils work is issued to our framework contracting partners within Wales Route.

The remit requirements from CP5 in to CP6 has changed from purely delivery focused, to design and delivery. Requiring the function to further develop and remain compliant with legislation and standard changes including CDM 2015. This is now supported further through the Works Delivery Health and Safety Advisor, the Planning and Reporting Manager team, Area Plant Manager team and Project Engineers. The additional support offers the technical, planning/development and engineering support for assurance and compliance, providing a smoother end to end delivery for the route.

9.6. Wheeled Plant strategy

Wheeled Plant represents a portfolio of assets that play a significant role in supporting the operation, maintenance, renewal and enhancement of the network. Whilst responsibility for the portfolio is spread across the business, most assets are managed within Route Services (RS). RS provides the route with wheeled plant services which are best provided from a national team. Collaboration has taken place with Route Services with respect to these services to align our requirements for CP6 with the service provision provided.

Grinding provides the most economic method for maintaining and remediating rail at the earlier stages of RCF (rolling contact fatigue) propagation. The introduction of rail milling capability will treat heavy and severe rolling contact fatigue, which unless treated would require re-railing.

The recent tender for the new tamper and ballast regulating contracts saw the Route and RS co-ordinating to align fleet capability with requirements. Continued sharing of fleets across routes continues to deliver best value for Wales.

Seasonal treatment from the SCO supplied fleet of specialist rail vehicles forms a key part of the Routes commitment to making our infrastructure resilient to the impact of the weather conditions. It is anticipated that our demand in CP6 will be broadly like today with a focus on reliability of supply.

Nationally there is increased demand for both plain line and S&C stone blowing due to proven track geometry outputs & the associated durability of the improvement will allow life extension of the track rather than renewal. Capability to meet the additional S&C demand will not be available in the first two years of the control period whilst new multipurpose machines are sourced by Route Services to replace life

expired plain line machines. The business will need to prioritise resources and where appropriate undertake alternative treatment in the meantime.

9.7. Maintenance strategy

The Wales Route maintenance strategy is based upon increased CP5 volumes and access availability, with additional rollout of risk-based maintenance and use of plain line pattern recognition; refinements in planning and separation of faulting and maintenance supporting improvements in work bank management, and mechanising work delivery where possible to support safer and more productive delivery.

The key variations from CP5 into CP6 include increased volumes in track, Off Track and the overarching implications of electrification Severn Tunnel through to Cardiff.   An increased focus on asset reliability and delay per minute will be delivered through an additional point care team resulting in two teams; these increased volume changes have been recorded within the activity-based planning submissions.

The increase in track maintenance volumes and associated cost relate to the requirement to deliver maintenance activities listed within the maintenance handbook, that were assumed to be transferrable into the Track Refurb work bank within the CP5 SBP. This proposal has proved difficult to deliver as these activities do not meet the scope required to be undertaken in line with the Cost and Volume Handbook for renewals. These volumes are asset strategy statements and are represented within Section 5 of this document. There is an increased volume associated with welding, switch replacement and inspections which support the change in track standards and an increase in volume for rail changing due to the increasing nature of rail defects identified through ultrasonic test train and eddy current testing additionally increased volume to support improvements in track geometry, specifically level 2 twist faults, and the lower tolerance levels associated with vertical longitudinal split defects in track.

The uplift in off-track maintenance volumes is to tackle the vegetation challenge within the Wales Route which has suffered historical neglect. The increased investment is in line with the national vegetation strategy, with the Wales Route reaching, and maintaining compliance by the end of CP6, with further discussion within appendix B of this report. As part of the routes commitment to apprenticeships per year. There is good operational and reputational opportunity in this area. There is considerable volume increase in the first four years to achieve compliance to standard with a subsequent slight decrease in year five and into CP7 to sustain the improvement.

Earthworks related drainage will be undertaken by the specialist planned preventative maintenance gangs.

The completion of electrification to Cardiff will have a significant impact upon maintenance activities. This will Impact inspection and maintenance of assets with further detail included in appendix B of this document (Ref A.9, A.19, A.29, A.31, A.35, A.37 & A.38) and notwithstanding the increased work associated with the maintenance and faulting of this new equipment.

Where lines have been electrified between Severn Tunnel and Cardiff provision has been made to account for the reduced access/productivity of maintenance activities required upon non-E&P assets over and above an incremental increase for the actual maintenance of the E&P asset.

The impact of re-signalling schemes is broadly neutral with regards to signalling and telecoms maintenance. Increases to infrastructure volume e.g. bi-directional signalling through south Wales are offset by risk-based maintenance of LED signals. Similarly, for north Wales coast any increase in infrastructure volume is offset by appropriate reduced maintenance regimes.

The current level of planned introduction of level crossing safety initiatives such as Covtec supplementary audible warning systems and Vamos miniature stop light overlay systems will require an increase to the maintenance workload however this is again offset by a reduction in

routine maintenance in areas of re-signalling and life extension.

9.7.1. Access

Maintenance activity will make best use of 'rules of the route' and 'no booked service' access, as well as planned abnormal blocks where possible. Every opportunity will be taken to maximise the utilisation of access, working with TfW to focus attentions where required.

9.7.2. Maintenance capability

Maintenance is continuing to convert sub-contract head count to direct head count where the work demand is consistent. In addition, we are increasing the number of indirect posts to meet the challenges of the CP6 II programme, amendments to track categories and the delivery of the vegetation compliance work.

We have been working with the central II programme to recruit additional resources for the DU System Support Managers. This is to prepare ourselves and our information systems for the effective realisation of the Intelligent Infrastructure Programme benefits. These posts are critical to successfully making the transition towards information-based decision making.

The maintenance volumes have been reviewed with the Asset Managers and changes to capacity have been assessed as part of the Activity Based Planning process. Track volumes have been adjusted to increase the volume of planned productive maintenance. In some cases, this has reduced our capacity to recover costs through delivering CapEx works.

We are supporting the pilot of Section Planner training modules. This will enable improvements in our planning capabilities; a key factor in achieving productivity improvements.

We will need to prepare team leaders and front-line managers for a future where information is more visible, and the richness of the information content provides opportunities to optimise plans and resources. This will require training, coaching and leadership. We have adopted the following vision to support this:

"Supporting and enabling our people every day, to safely and efficiently maximise the customer experience.
Right people, in the right place, with the right competencies, at the right time, with the right kit and engaged".

There is a list of assumptions to support our ability to deliver our CP6 plan:
- Reduction in access associated with electrical isolation requirements;
- II programme delivering significant technological and planning capabilities improvements;
- LEAN principles removing a significant amount of process waste;

There is some uncertainty about the scale and timing of some of these enablers. This represents a significant risk to success.

Assumed no change in traffic patterns/additional traffic, however we are aware that it is a key output of TFW to increase frequency/change rolling stock quite significantly. Additionally, the significant enhancements planned for the CVL network will restrict the access we will be able to book on affected routes (SWM2/ BRY/ VOG) due to the need to limit overall disruption.

9.8. Operations strategy

The Wales Route operating strategy is assumed to not significantly change prior to the new franchise agreement, which is due to be let towards the end of CP5. The Cardiff Area Signalling Renewal Scheme (CASR) is completed and offers a step change improvement in capacity on the Cardiff Valley Lines network, with the opportunity to optimise the number of trains per hour through the central core between Cardiff Queen Street station and Cardiff Central station.

CASR allows train services, particularly in the peak, to be optimised through the provision of new platforms and new turn-backs at Cardiff, Barry, Caerphilly, Tir-Phil and Pontypridd. The realisation of these benefits for passengers in the Cardiff journey-to-work area rests with Welsh Government who will be the awarding authority for the next Wales and Borders passenger franchise.

Welsh Government through Transport for Wales (TfW) has procured an Operator & Development Partner (Keolis Amey) whose concept design for the Core Valley Lines (CVL) north of Cardiff will retain the recently installed CASR signalling. Using changes to the Cardiff Queen Street and the deployment of new train-tram vehicles, TfW intends to increase the level of service throughout the CVL network. Trains will run between the divested CVL railway and the route's retained assets, and these connections are currently being discussed.

Further changes are expected across the Wales & Borders franchise area with the replacement of the current train fleet and the enhancement of services in a rolling programme through CP6. This will include increased frequencies on the Marches line and the reduction of journey times. The Route will work with TfW to understand what investment may be required to release further capacity.

The Route will embed its collaborative working relationship with Keolis Amey by entering a non-commercial partnership agreement at the start of CP6 which will allow both parties to explore working more closely on delivery and realising mutual benefits. We want to further develop the WROC from a co-located control to an integrated control and command organisation as a centre of operational excellence.

We are currently co-located with TfW control in the WROC and have been for the past 10 years and will look to develop & strengthen this into a full joint control and command organisation with a view to creating a centre of operational excellence.

We will improve operations in CP6 through:

- Further joint control and co-location of the Wales Route and TFW teams across operational functions
- Better alignment of commercial incentives between Wales Route and the TFW including risk sharing
- Focusing on key passenger flows, taking a holistic view that considers operational performance alongside service frequency and usage
- Leveraging the benefits of the CASR which will allow train services, particularly in the peak, to be optimised through the provision of new platforms and new turn-backs at Cardiff, Barry, Caerphilly, Tir-Phil and Pontypridd
- Maximising the benefits of Re-signalling on the North Wales Coast
- Maximising the introduction of new and different rolling stock on sectional running times
- Improving the way, we collect, analyse, and share operational performance data, so that we make better decisions
- Making best use of access opportunities on current infrastructure between Newport and Shrewsbury

- Initiatives to improve resilience to weather and other unplanned disruptions. This includes building on the Weather Resilience and Climate Change Plan we developed in CP5

- The Route will continue to provide a dedicated resource to manage, co-ordinate and resolve close calls and public complaints

- Improved Line Manager to Signaller ratio for better management of SSM's, MOM's & Signallers

- Security being led by and over seen by our Incident Officer team led by the Senior Incident Officer to align with the National strategy being led by the Director of Incident Management and Operational Security

Traffic Management (TM) installation and review will be completed for the Cardiff area in CP5, where the benefits of the system will be evaluated. Further rollout of TM on the Wales Route in CP6 will be based upon the support of a viable business case and the availability of funds within the control period.

Operator training for new schemes (CASR/Port Talbot/traffic management/North Wales Coast) will be completed in CP5. However, we have the recently appointed two competency and Training specialists (CATS) that report to the current operations manager who will be leading on a programme of training and development starting with the new signalling workstations and traffic management in CP5 and, continuing through out CP6.

As we move into CP6 the CATS will be utilised for continual development of signallers and controllers to maximise new technology and processes derived from the implementation of the incident officer deployment, traffic management and train running controllers. CATS will deliver initial electrification AC signaller training to support electrification to Cardiff, as well as running a programme of safety critical communications training and

development to support the close out of recommendations from level 1, 2 and 3 operational accident and incident investigations.

The link to investigation outputs is our driver to reduce operational risk/ train accident risk and requires collaboration with our TOC and FOC industry partners. Train Accident Risk Reduction is a Route scorecard measure driven by the Route Safety & Operations and Asset Management teams.

During CP5 we have set up a resource working group in Wales and Borders, the quorum of which is HoOD, COM and OMs, Finance and HR. The terms of reference are to continually review, develop and improve our frontline operations teams (signallers, mobile operations managers and shift signalling managers), this group has an objective to reduce fatigue, reduce overtime worked and improve the resilience of rostered teams leading to more robust business continuity. This change will require an increase in operations headcount that will stabilise by the start of CP6. In CP6 it is anticipated that there will be greater stability regarding new signalling workstations/ technology and signalling schemes as our largest schemes in CP5 will be in and operating.

Electrification whilst bringing a change of operational process will not change signaller/ mobile operations manager/ controller headcount. There is no plan for an electrical control room (ECR) on the route in CP6 [A.35].

In the remainder of CP5 we are seeking to lay the foundations for the above by working with the train operator to streamline service recovery and improve joint operations and joint decision making. This includes the introduction of the senior incident officer team to collaboratively improve control and command of incidents whilst delivering plans to predict, prevent and reduce all failures; fleet, asset and external. This includes establishing joint governance arrangements formalised in a collaboration charter and joint operations board. Key lessons learnt incorporated from CP5: A collaborative whole railway view to what's best for the customer is key to making the right decisions as an industry partnership.

9.9. Route Services and IT

On the Wales route we work closely with route services throughout the development of service catalogues, and identified our mission critical services, which we jointly review periodically. We include senior members of the route services leadership team in our key meetings, including route exec and periodic business review (PBR).

As examples of working together, route services has supported the Wales route in improving road vehicle safety, delivering the IT services for the Wales and Borders HQ move, and jointly creating a prioritised business case for the improvement of network capacity and the installation of Wi-Fi at maintenance depots.

Our strategic business plans are closely aligned, with some specific areas of efficiency and opportunity identified, including:

- Introduction of rail milling which will deliver significant route volume and efficiencies;

- Increased focus on growing the welsh economy, and working with welsh suppliers;

Route services supplies the Wales route with the services best provided from a national team. This approach enables national coordination, and for Network Rail to benefit from economies of scale and greater efficiency.

Route services consists of four primary functions. Supply chain operations (SCO) delivers the logistics, materials, components and fleet that enable the maintenance and renewal of our railway infrastructure. IT shapes, builds and runs the technology services needed to support our railway, now and into the future. Business services manages and delivers support services on our behalf such as shared services, and training and contracts & procurement (C&P) secures and manages the national contracts and supplier relationships which we rely on.

Through the services they deliver, we look to route services for subject matter expertise, access to their supply chain, and strong delivery partnerships with suppliers, to get the best value and quality possible for our route. Route services is responding positively to our challenge to them to deliver the outstanding performance, cost competitiveness and commercial approach which we expect.

The introduction of service catalogues with customer-facing KPIs has enabled us to hold route services to account at a local level, as well as identify mission critical services for the route, and collaborate on joint improvement plans.

Route Services – Services offered to the Route

Supply Chain Operations

Aerial Survey
Breakdown Recovery
Delivery of Materials by Rail
Delivery of Materials by Road
High Output
iStore
Lifts and Escalators
Mechanical Electrical Lock Fitting
Mobile Flash Butt Welding
National Signalling Works
On Track Plant
Operational Property Helpdesk
Overhead Line Condition Renewal Works
Product Management
Project Engineering
Project Management Services
Rail Profile Treatment Grinding and
Milling
Recycling
Road Fleet
Seasonal Autumn
Seasonal Summer Weedspray
Seasonal Winter
Stoneblowing
Tamping

Information Technology

Building Infrastructure IT (BIIT) Projects
IT Delivery Projects
IT Helpdesk
IT Strategy and Planning Services
Local IT Delivery Management
Technology Infrastructure Services

Business Services

Accounts Payable
Apprentices
Billing and Income Collection
Business Intelligence Team
Competency Assurance
Content Management
COOM (Call-off Order Management)
Energy Bureau
Engineering Graduates
Expenses
HRSS Employee Records
HRSS Medicals
HRSS Payroll
HRSS Recruitment
Leadership and Professional
Development
Organisational Data Maintenance
PPE Helpdesk
Records Management
Schedule 4 Compensation
Taxation and Accounting
Technical Competencies
TOC Billing and Income Collection

Contracts & Procurement

Category Management
Contract and Supplier Management
Governance and Assurance
Procurement

10. Headwinds and efficiency
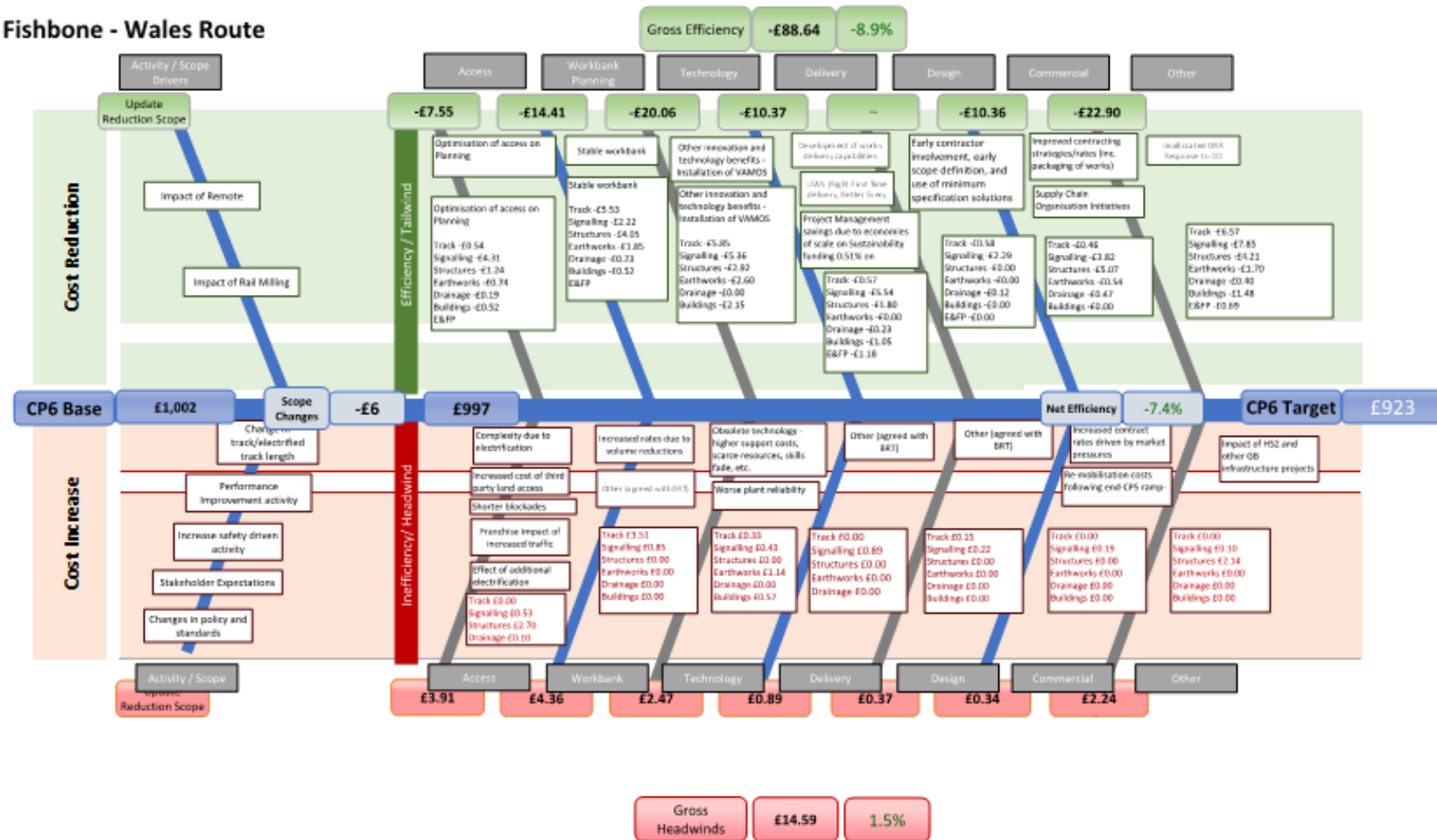
CP6 Wales Opex Fishbone (Baseplan RF08 Currentrf)
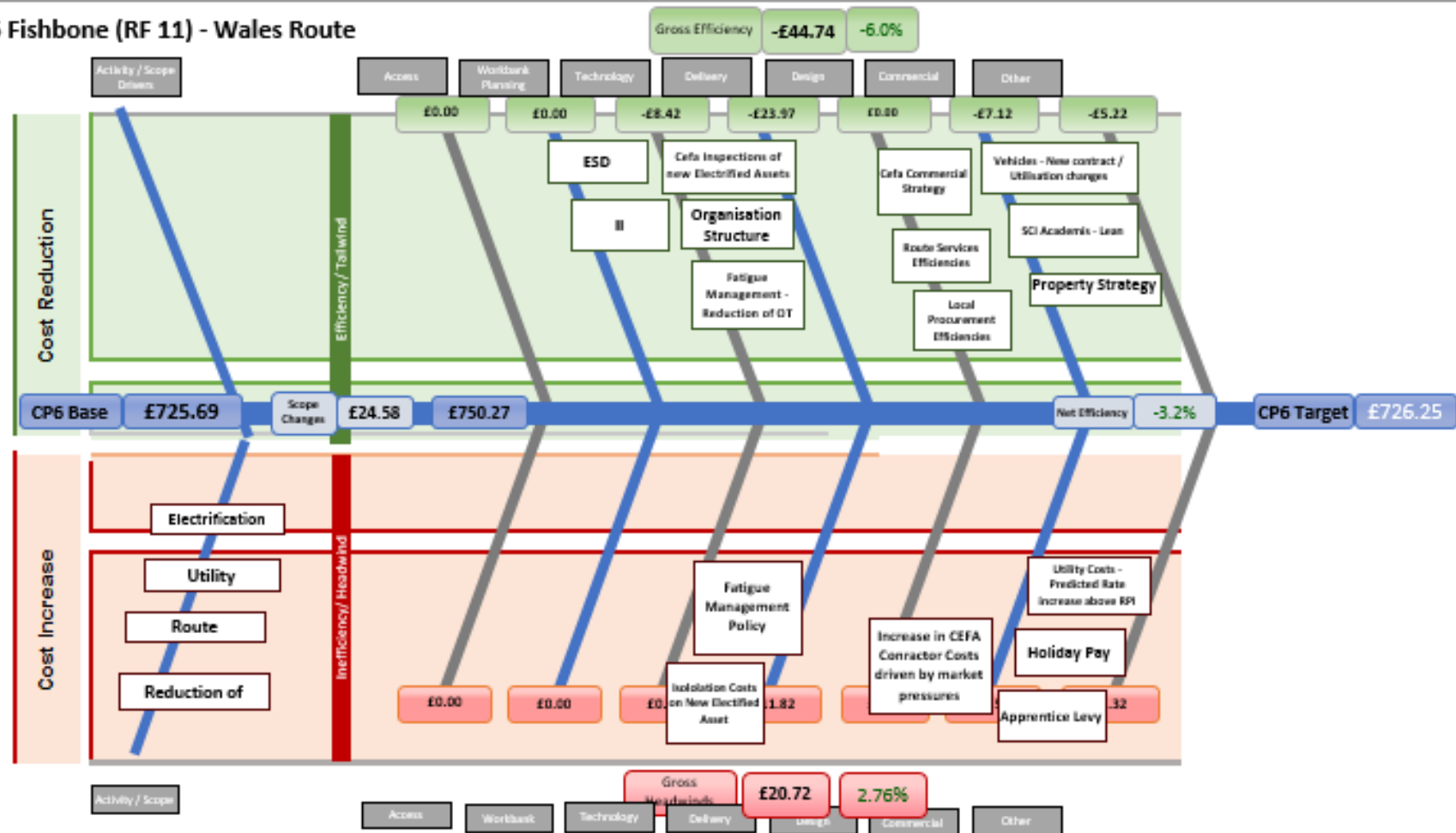
11. Risk and uncertainty in the plan

	Unit of Measure	CP5 (£m)	CP6 (£m)						CP7 (£m)	
		18/19	19/20	20/21	21/22	22/23	23/24	CP6	24/25	25/26
Risk (SBP Route held)	£m	0	-	8	10	12	11	*41*	11	11
Risk (DD Route held)	£m	0	-	9	15	17	18	*59*	18	18

This section provides an explanation of the how we have built up our overall plan and sets out our estimate of the degree of financial uncertainty within this plan.

Pre-efficient costs in our plan are based on 'current rates' but include any additional scope needed to deliver the outputs in the plan. We have used 2016/17 unit rates to develop our capital expenditure forecasts and CP5 exit rates for support, operations and maintenance expenditure forecasts. Drivers of rate increases (headwinds/inefficiencies), or rate reductions (efficiencies/tailwinds), where there is a reasonable expectation they will occur, have been identified separately from the core CP6 plan.

The combination of our core CP6 plan, headwinds/tailwinds and efficiencies/inefficiencies is our 'submission' and represents the 'most likely outcome' for CP6. The content of our plan reflects funding aligned to the draft determination (DD). We consider this plan to be realistic and, therefore, deliverable in CP6.

Current unit rates are likely to include some risks that were not originally included in CP5 plans but that have materialised during the current control period. Because of this approach, there is a potential that some risk and uncertainty is already included in our core CP6 plan.

Whilst it is difficult to precisely estimate the likelihood of delivering our plan in CP6, it seems reasonable to suggest that; overall, there is a 45% to 55% likelihood of the outputs in the plan being delivered for the forecast cost in our CP6 plan. This means that for approximately half of the time, we will be able to deliver our plan for the forecast cost. It is anticipated that delivered schemes that fall outside of this range will be within the stated variances within our submitted cost and volume templates.

Figure 11.1, below, presents our estimate of the overall range of financial uncertainty across our income and expenditure for CP6. It also identifies the main drivers of the uncertainty ranges. The information in this table is based on route analysis of the financial uncertainty in support and operations, maintenance and renewals costs, and income. The spot values in Figure 11.1 include headwinds/tailwinds and efficiencies/inefficiencies. The financial uncertainty ranges represent our assessment of the outturn income and expenditure that could occur in 95% of scenarios in CP6.
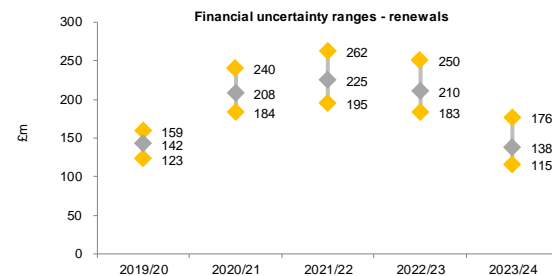
Figure 11.1: CP6 financial uncertainty ranges

Renewals

Uncertainty range for CP6

£m in cash prices including inflation uncertainty	Low	Spot	High
Values for the renewals range in strategic plan	-124	923	165
	-13%		18%

Key drivers of the renewals range	How much of the range does the driver explain?				Percentage of spot	
	Low		High		Low (%)	High (%)
	%	£m	%	£m		
1 Cost of supplier and contractor costs	-24%	-30	33%	54	-3%	6%
2 Other 1	-44%	-54	11%	19	-6%	2%
3 Deliverability of forecast efficiencies	-5%	-6	18%	29	-1%	3%
4 Availability of access	-8%	-10	11%	18	-1%	2%
5 Impact of new franchises	0%	0	6%	10	0%	1%
Other	-4%	-5	6%	10	-1%	1%
Inflation uncertainty	-15%	-18	15%	25	-2%	3%
Total	**-100%**	**-124**	**100%**	**165**	**-13%**	**18%**

Financial uncertainty ranges - renewals

Maintenance

Uncertainty range for CP6

£m in cash prices including inflation uncertainty	Low	Spot	High
Values for the maintenance range in strategic plan	-36	411	71
	-9%		17%

Key drivers of the maintenance range	How much of the range does the driver explain?				Percentage of spot	
	Low		High		Low (%)	High (%)
	%	£m	%	£m		
1 Understanding of maintenance and/or renewals work banks - Scope Change on DU	-14%	-5	28%	20	-1%	5%
2 Other 2 - Core Valleys - Divestment	-34%	-12	0%	0	-3%	0%
3 Impact of new franchises - Increased Traffic Forecast not in base plan leading to	0%	0	14%	10	0%	2%
4 Operational impact of new assets and systems - Changes in Standards	-14%	-5	7%	5	-1%	1%
5 Deliverability of forecast efficiencies - Development and Delivery of Inteligent	-7%	-3	7%	5	-1%	1%
Other	-7%	-9	28%	46	-2%	11%
Inflation uncertainty	-24%	-9	16%	11	-2%	3%
Total	**-100%**	**-36**	**100%**	**71**	**-10%**	**24%**

Financial uncertainty ranges - maintenance

Support and operations

£m in cash prices including inflation uncertainty	Uncertainty range for CP6		
	Low	Spot	High
Values for the support and operations range in strategic plan	-20	216	28
	-9%		13%

Key drivers of the Support and operations range	How much of the range does the driver explain?					Percentage of spot	
	Low		High			Low (%)	High (%)
	%	£m	%	£m			
1 Operational impact of new assets and systems - Uncertaintany of impact of the	-12%	-3	36%	10		-1%	5%
2 Other 1 - Core Valleys Divestment	-40%	-8	0%	0		-4%	0%
3 Weather and other serious incidents - Seasonal - RHTT /Major Weather event	-25%	-5	0%	0		-2%	0%
4 Deliverability of forecast efficiencies - Uncertainty around delivery of indirect	0%	0	18%	5		0%	2%
5 Changes in policy and practises e.g. asset policies, fatigue management or new	0%	0	18%	5		0%	2%
Other	0%	0	9%	2		0%	1%
Inflation uncertainty	-23%	-5	20%	6		-2%	3%
Total	-100%	-20	100%	28		-9%	13%

Financial uncertainty ranges - support and operations

	2019/20	2020/21	2021/22	2022/23	2023/24
High	45	48	48	50	52
Spot	40	43	42	44	46
Low	39	39	38	39	41

Total expenditure

£m in including inflation uncertainty	Uncertainty range for CP6		
	Low	Spot	High
Support and operations	-20	216	28
Maintenance	-36	411	71
Renewals	-124	923	165
Values for the total expenditure range in strategic plan	-179	1,550	265
	-12%		17%

Financial uncertainty ranges - total expenditure

	2019/20	2020/21	2021/22	2022/23	2023/24
High	296	384	407	399	328
Spot	262	333	350	338	267
Low	237	298	308	298	230
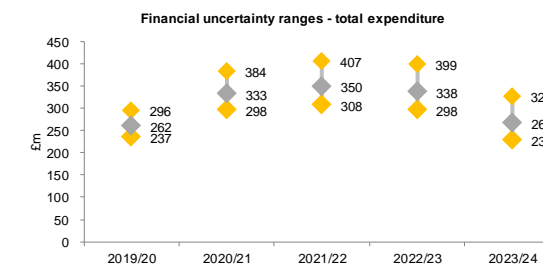
Income

£m in cash prices including inflation uncertainty	Uncertainty range for CP6		
	Low	Spot	High
Values for the income range in strategic plan	-36	304	21
	-12%		7%

Key drivers of the Support and operations range	How much of the range does the driver explain?					Percentage of spot	
	Low		High			Low (%)	High (%)
	%	£m	%	£m			
1 Access charging income	-44%	-16	59%	13		-5%	4%
2 Schedule 4	-11%	-4	14%	3		-1%	1%
3 Schedule 8	-10%	-4	0%	0		-1%	0%
4 Other income	-22%	-8	0%	0		-3%	0%
Inflation uncertainty	-13%	-5	27%	6		-2%	2%
Total	-100%	-36	100%	21		-12%	7%

Financial uncertainty ranges - income

	2019/20	2020/21	2021/22	2022/23	2023/24
High	60	61	69	70	66
Spot	58	56	64	65	61
Low	58	48	56	56	51
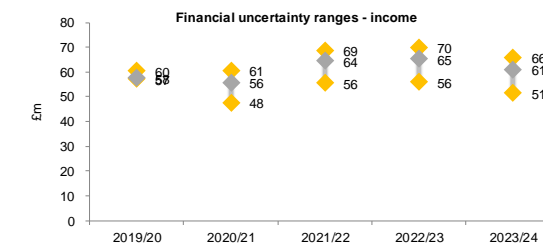
12. CP6 regulatory framework

This section sets out our latest forecast of expenditure and income for CP6, also how our forecasts compare to the assumptions ORR made in calculating our CP6 route funding settlement. Consistent with ORR's PR18 final determination, the tables in this section include route-incurred, and allocated, expenditure and income.

CP6 expenditure forecast

In Table 12.1, below, we provide our latest CP6 forecast of expenditure. The forecast, below, will act as the baseline against which ORR measures financial performance in CP6.

Table 12.1: CP6 expenditure forecast

£m in cash prices	19/20	20/21	21/22	22/23	23/24	Total	Other	CP6
Support	9	11	10	11	12	52	144	197
Operations	28	29	30	31	32	151	4	155
Maintenance	83	85	86	86	85	424	20	444
Renewals	142	208	225	210	138	923	130	1,053
Schedule 4 & 8	6	9	7	8	8	38	8	46
EC4T, industry costs and rates	-	-	-	-	-	-	82	82
System Operator						-	27	27
GPF: route	-	8	10	12	11	41	-	41
GPF: contingent asset management	-	9	15	17	18	59	-	59
GPF: centrally-held						-	55	55
Total costs	268	359	382	374	304	1,687	471	2,158

*Other represents the route allocation of national function costs.

In calculating the route funding settlement for CP6, ORR made assumptions about our costs. Table 12.2, below, compares our CP6 business plan expenditure forecasts with ORR's PR18 final determination assumptions.

Table 12.2: Business Plan vs. Final Determination expenditure assumptions

£m in cash prices	CP6 Business Plan			Final Determination			Variance		
	Route	Other	CP6	Route	Other	CP6	Route	Other	CP6
Support	52	144	**197**	5	128	**133**	-48	-16	**-64**
Operations	151	4	**155**	235	4	**239**	85	-0	**84**
Maintenance	424	20	**444**	377	20	**397**	-47	-0	**-47**
Renewals	923	130	**1,053**	929.8	155	**1,084**	7	24	**31**
Schedule 4 & 8	38	8	**46**	44	0	**44**	7	-8	**-1**
EC4T, industry costs and rates	0	82	**82**	0	89	**89**	0	7	**7**
System Operator	0	27	**27**	0	23	**23**	0	-4	**-4**
GPF: route	41	0	**41**	41	0	**41**	0	0	**0**
GPF: contingent asset management	59	0	**59**	58	0	**58**	-0	0	**-0**
GPF: centrally-held	0	55	**55**	0	58	**58**	0	4	**4**
Total costs	**1,687**	**471**	**2,158**	**1,690**	**477**	**2,168**	**4**	**6**	**10**

Please note: *ORR's PR18 final determination did not separately identify the costs allocated to routes from route-incurred costs. However, the table, above, identifies allocated costs based on underlying information from ORR's analysis.*

The variance to the Final Determination for the route for Support, Operations and Maintenance include changes to cost allocation and a reclassification of CEFA expenditure from Renewals to Opex. Re-allocation of various functions including Planning, Change and C&P have been reallocated from Operations to Support, the COO and CRM been reallocated from Maintenance to Operations. These changes to allocation more reflect the Route Business structure. The movement in Schedule 4 is due to revised pricing models using current volumes and spend.

CP6 income forecast

The expenditure in Table 12.1 needs to be paid for. In Table 12.3, below, we provide our latest CP6 income forecast. Our charging income forecast reflects our latest forecast of CP6 traffic levels and is consistent with final CP6 price lists.

Table 12.3: CP6 income forecast

£m in cash prices	19/20	20/21	21/22	22/23	23/24	Route	Other	CP6
Variable charges (VUC, EAUC)	-6	-6	-7	-7	-7	**-33**	0	**-33**
Stations LTC	-12	-13	-13	-13	-13	**-64**	0	**-64**
EC4T	0	0	0	0	0	**0**	-8	**-8**
Schedule 4 ACS	-5	-5	-6	-6	-4	**-26**	-15	**-41**
FTAC	-34	-35	-39	-40	-36	**-183**	-631	**-814**
Network Grant (SOMR)	0	0	0	0	0	**0**	-874	**-874**
Income from FNPO	0	0	0	0	0	**0**	-291	**-291**
Other single till income	-4	-4	-4	-4	-4	**-20**	-21	**-41**
Income within scope of PR18	**-61**	**-62**	**-69**	**-70**	**-65**	**-327**	**-1,840**	**-2,167**

Table 12.4: Business Plan vs. Final Determination income assumptions

£m in cash prices	CP6 Business Plan			Final Determination			Variance		
	Route	Other	CP6	Route	Other	CP6	Route	Other	CP6
Variable charges (VUC, EAUC)	-33	0	**-33**	-36	0	**-36**	-3	0	**-3**
Stations LTC	-64	0	**-64**	-65	0	**-65**	-0	0	**-0**
EC4T	0	-8	**-8**	0	-9	**-9**	0	-0	**-0**
Schedule 4 ACS	-26	-15	**-41**	-44	0	**-44**	-18	15	**-3**
FTAC	-183	-631	**-814**	-816	0	**-816**	-633	631	-2
Network Grant (SOMR)	0	-874	**-874**	0	-875	**-875**	0	-0	-0
Income from FNPO	0	-291	**-291**	0	-291	**-291**	0	0	0
Other single till income	-20	-21	**-41**	-23	-10	**-33**	-3	11	8
Income within scope of PR18	**-327**	**-1,840**	**-2,167**	**-984**	**-1,184**	**-2,168**	**-657**	**656**	**-1**

Please note: *Government grants for corporation tax, financing costs, BT Police costs and enhancements were not agreed as part of ORR's final determination, so we have not included them in our forecast of income for completeness.*

*Other represents the route allocation of national function income.

In calculating the route funding settlement for CP6, ORR made assumptions about the amount of income we will receive from charges and other income. Table 12.4, below, compares our CP6 business plan income forecasts with ORR's PR18 final determination assumptions.

Net Position:

£m in cash prices	19/20	20/21	21/22	22/23	23/24	Route	Other	CP6
Income	-61	-62	-69	-70	-65	**-327**	-1,840	**-2,167**
Costs	268	359	382	374	304	**1,687**	471	**2,158**
NET	**207**	**297**	**313**	**305**	**239**	**1,360**	**-1,369**	**-9**
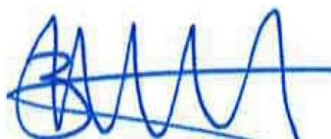
£m in cash prices	CP6 Business Plan		Final Determination			Variance		
	Other	CP6	Route	Other	CP6	Route	Other	CP6
Income	-1,840	-2,167	-984	-1,184	-2,168	**-657**	656	**-1**
Costs	471	2,158	1,690	477	2,168	**4**	6	**10**
NET	**-1,369**	**-9**	**707**	**-707**	**0**	**-653**	**663**	**9**

13. Sign-off

This document and accompanying templates are owned by the Route/Alliance Managing Director (A/RMD).
Submission of this document indicates confirmation that:

- **all appropriate level 1 assurance activities have been undertaken (see separate advice on definition of level 1 assurance);**
- **the A/RMD 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 A.**
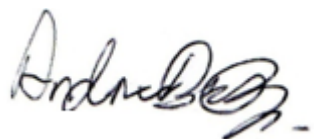
Bill Kelly
Route Managing Director   25/03/2019

Tom Stanley
Director, Route Asset Management   25/03/2019

Andrew Banks
Route Finance Director   25/03/2019

Kevin Collins   25/03/2019
IP Regional Delivery Director

Appendix A   Stakeholder Engagement

a. Scope and Methods of Engagement

Meaningful engagement with our stakeholders is crucial to the authenticity of our Route Strategic Plan (RSP). Developing a comprehensive perspective of stakeholder needs requires us to understand the priorities of our funders, partners, customers, and passengers and the drivers of these priorities. In common with the other Network Rail Routes, Wales Route must balance the requirements of a vast and diverse set of stakeholders with different interests in the railway across a geographically diverse network. However, for the Wales Route in preparing for CP6, this complexity is compounded by two factors:

1. **Welsh Government (WG) and Transport for Wales (TfW) have greater autonomy and influence:** In 2014, it was agreed that WG, in the form of TfW, would let the contract for the new Wales and Borders operator. WG has also become an increasingly important funder of the railway. However, our primary funder remains UK Department for Transport. Therefore, in developing our CP6 plans, the Wales Route must balance the requirements of both devolved and national government.

2. **Potential divestment of the core valley lines (CVL):** The contract for the new rail passenger service commenced in October 2018. The route has been working closely with Transport for Wales – Rail Services to understand the contract and align goals where possible. The contract has the potential to include major infrastructure investment in the CVL which may result in a change in the roles and responsibilities of the Wales Route in respect of the CVL infrastructure. Mechanisms to establish the impact of this change are being developed which will support the change control process with the ORR. Alongside this the contract has targets associated with significantly increasing the number of services running on the network which has the potential to impact elements of the plan. The route is working collaboratively with TfW to understand the planned changes and their impact on the plan.

Further details for the Wales Route Stakeholder programme are included within appendix A.

a. Who are our stakeholders?

Partners	Regulators & Funders	Passenger, Public & Interested parties
Transport for Wales (TfW) Great Western Railway (GWR) Virgin trains (VT) XC trains (XC) London Midland trains DB Cargo Freightliner Colas, DRS, GBRF Rail Delivery Group British Transport Police Supply chain	Department for Transport Welsh Government Office of Rail & Road Transport for Wales Elected Representatives MP's & AM's Businesses & Developers Local authorities Natural Resources Wales (NRW) Environment Agency (EA) Natural England (NE)	Transport for Wales Transport Focus Line side neighbours Local rail interest groups Community rail groups Local Communities Business association Wales Keolis Amey

b. How have we engaged with our stakeholders?

Who	How	What	When/Outcome
All identified Stakeholders	External Stakeholder workshop.	Presented the CP6 plan in its current form, described the basis for the approach and the funding target we have based our working assumptions on. The primary objective was to obtain feedback on stakeholder priorities to support the development of our plan. A second session was used to update on progress to date and review how the feedback has been used and incorporated where applicable. Specific questions were asked to obtain further engagement, feedback and understanding of priorities	23rd February 2017, 58 invitees, 37 attended Feedback obtained and reviewed for incorporation into the plan 27th July 2017, 70 invitees, 52 attended Further update on plan progress and how feedback was used, raising questions for the stakeholders to feedback on

Route, IP & Supply Chain	Workshop	A workshop identifying issues that have affected delivery of CP5 in Wales and the areas of opportunity to focus on over the next 18 months.	6th April 2017, 32 in attendance Created a team to follow up and complete actions identified
Route, IP & Supply Chain	Delivery Integration & Efficiency Team (DIET)	Formed the DIET to work on the outcomes from the Route, IP and supply chain workshop	May 2017 – September 2017, 12 team members Providing input to specific sections of the RSP to support deliverability
ORR PR18 engagement	Presentation and discussion	L1 Engagement with ORR on our plan development L2 Engagement with ORR on our plan development ORR consultation Route response L3 meetings with RAMs First RSP review meeting	15th May 2017 21st June 2017 18th July 2017 September 2017 & November 2017 December 2017
Elected representatives – WG, AM & LGA	Stakeholder Newsletter, quarterly. Stakeholder Newsletters Quarterly. Transport Leaders Forums which involve elected representations. Meet regularly with cabinet secretary for Economy + Transport and with AMS, MPs and local authority representatives	Provide details of our CP6 plans to a wide political audience during the summer recess Provide a face to face Q&A session for AM's & LGA on the current plan	Newsletters quarterly. Engagement with elected representatives ongoing throughout the year.
Community Rail, TOC & FOC,	Established Head of Customer Relations forums, directors' liaisons 1-1 and organised briefs	Quarterly meetings with each community rail group, engaging in person on topics for discussion TOC/FOC interactions through various channels, performance meetings, directors' liaison meetings, train planning, timetable planning	Quarterly – next meeting in September Periodic forums with TOC & FOCs customers TfW briefing November 2017
Route Supervisory Board – TfW, GWR, Transport Focus	Paper presenting update of Route Strategic Plan Following Final Determination	Presented final determination settlement and impact on plans.	6th November 2018 Update noted.

Route Supervisory Board – TfW, GWR, Transport Focus	Paper presenting review of measures and approach to setting targets	Presented engagement to review scorecard measures, proposed suite of aligned measures, change control removing measures, approach to setting targets.	6th November 2018 Approach and measures endorsed in principle with additional measures added aligned with TFW Grant Agreement. Key feedback that measures need to reflect passenger experience. Requested paper for noting progress at December board with full review of targets planned for January board prior to Rf11 submission.
Route Supervisory Board – TfW, GWR, Transport Focus	Presentation providing update of progress	Presented latest view of train performance and customer measures. Inclusion of passenger focused train performance and grant agreement measures.	4th December 2018 Next meeting in January to review targets.
Joint Safety Board	Presentation presenting proposed safety measures and targets	Presented high level safety KPIs and long-term targets. Included detail of milestones for level crossings and train accident reduction risk.	9th January 2019 Scorecard targets and milestones endorsed.
Joint Operations Governance Board	Paper presenting proposed scorecard measures and targets	Presented proposed targets across each area of scorecard including top investment milestones, train performance and customer. Presented outputs of train performance model developed to incorporate latest assumptions following contract award. Periodic customer satisfaction measure replaced by stations and trains satisfaction measures due to further work required to develop periodic survey results, potential to include this measure when scorecard reviewed prior to CVL divestment.	15th January 2019 Majority of measures and targets endorsed. Feedback to review GWR trajectories to align with GWR PPM targets. Measures reviewed, updated and subsequently endorsed.

| Route Supervisory Board – TfW, GWR, Transport Focus | Paper recommending endorsement of proposed scorecard measures and targets for ORR and NR board sign-off. | Presented proposed measures and targets following endorsement at joint safety and operations boards. Included review of weightings against each measure and reviewed few amendments post previous joint board sign-off. This included introduction of freight growth metric and changing two investment milestones. Presented next steps with regards to reviewing long-term train performance trajectories following development of joint strategy and core valley lines (CVL) divestment change control. | 29th January 2019

Scorecard endorsed including amendments.

Next meeting prior to Rf4 submission to review impact of CVL divestment on scorecard.

Periodic – Next meeting to review targets and discuss strategic lead. |

b. Outcomes of engagement

    a. What are our stakeholder requirements?

Key themes that emerged from our engagement with stakeholders included the reliability and punctuality of train services, journey time reduction, less unplanned engineering work, better connectivity and delivering value for money. Stakeholders are also keen to see greater cross-industry collaboration, improved relationships with lineside neighbours and changes to the way we respond and engage with stakeholders. The National Passenger Survey results and other sources of customer feedback show that the passenger priorities are focussed on capacity, reliability and punctuality.

    b. How have we prioritised stakeholder needs?

Stakeholder priorities are at the heart of our plans for CP6. We are committed to reducing the number of service affecting failures and delivering a more resilient and reliable railway through enhanced maintenance strategies, greater use of remote condition monitoring and a 'predict and prevent' approach to asset management. Our commitment to improving engagement with passengers, our stakeholders and lineside neighbours is reflected in our local scorecard measures and we will continue to work closely with industry partners, building on the collaborative 'one voice' approach established in CP5.

    c. How stakeholder needs have been prioritised?

        1. Feedback from stakeholders has been continually reviewed by the Route and independently. This feedback has been used to assist in prioritising areas for greater focus and investment; ensuring stakeholder needs are addressed whilst balancing the activities across safety, performance, reputation and sustainability.
        2. Prior to the review of our stakeholder feedback it was noted that there are certain expectations of the Railway that will go unmentioned in

such events that relate heavily to the Wales Route mission to deliver for our customers a **safe, reliable, affordable and growing railway**. This is at the core of our CP6 plan, and so the outputs from this process have been used to make subtle adjustments to elements of our plans to exceed our customers' expectations.

3. The first stage of analysis was to study the feedback given from workshops and other engagement mechanisms presented in the previous tables. The second stage was to take a holistic view of the feedback that had been collected, identify common categories from all feedback and group these into themes below.
4. This approach means that the prioritised needs listed below are directly from our stakeholders in their words.

Consolidated number	Prioritised need	Extent its addressed	Link to Short & long term route objectives	Rating	Reason
1	More consideration of passengers	We will optimise assets and resources to deliver efficiencies to our customers, improving the passenger experience reducing disruption, recovering quicker and cost, whilst improving customer information with our Incident Officer team and new technology such as Traffic Management in the Wales Railway Operating Centre (WROC)	Passenger satisfaction improvement is both a short & long-term route objective. It is measured through surveys and is an agreed scorecard measure with the train operator		This is shown as Amber due to the ongoing nature of the activity and the complexity of measuring success against the proposed outputs of our plan. We are looking to put the passenger at the heart of everything we do. We recently won the Golden Whistle Award for reducing NR delays & we were the only route who increased satisfaction in the NRRS.
2	How will you deliver for passengers and lineside neighbours?	We will continue to build on our work with our rail partners, using satisfaction survey results and feedback, working closer with Transport Focus, Rail Interest Groups & Community rail groups, ensuring we respond & communicate effectively with communities, neighbours and passengers alike	Improving passenger satisfaction & reducing the time to close out complaints is an agreed scorecard measure with the train operator		

3	A more joined up approach is required, with shared objectives	Work with customers to build on successful collaboration with the train operator.	The Route has created an Industry Supervisory Board to further build collaboration, represent the customer and for the railway in Wales and Borders to be held to account with an independent chair		For CP6 we are aligning our performance metrics with TFW. Moving away from PPM to measuring on time at all stations and average passenger lateness.
4	Greater transparency is needed during planning and delivery	Cross-disciplinary planning across operations, maintenance, renewals & enhancements reporting on processes through a score card measure. The Route is also undertaking a Planning Review starting at section level with the aim of improving our planner capability in support of efficient planning	The Route measures T-18 & T-12 late notice changes to access arrangements and looking to further joint working with the new franchise		
5	Better contingency planning	Scenario planning to improve contingencies, investing in our joint command & control functions to have more robust business continuity strategies and application. We are introducing Incident Officers & Traffic Management in the WROC to enable improvements in: incident response, ownership of contingency plans, embedding changes associated with lessons learnt	Our objective is to have a joint command & control structure using new technology & processes to minimise impact to customers		Shown as an Amber risk to delivery whilst joint strategy is developed.
6	More flexible response to change/ ability to react to short-notice changes in the programme	Comprehensive projects work bank that enables us to respond to short notice change and maximise opportunities, to have contingencies in place for engineering work alterations to have the ability to utilise possessions for other work if work is cancelled	Our objective is to have a work bank that is aligned with our supply chain and our joint access planning process to enable maximum utilisation of possessions and rail access		Shown as an Amber risk due to the complex nature of aligning multi-functional renewal interventions with maintenance activity fair enough out to minimise disruption and maximise access opportunities

7	Does the Wales Route have the capacity/ability to deliver on its plans?	Yes, we will optimise assets and resources to deliver efficiencies to our customers and reduce disruption, ensuring the work bank is not only deliverable but achievable with supply chain partners and IP being heavily involved in the planning processes.	We are working with our supply chain giving an early view of the work bank with the objective of aligning it with their resource & delivery planning throughout CP6 and beyond. Where certain interventions require a national approach (e.g. major signalling renewals) we are working with other routes to optimise resource and avoid conflict		Shown as an amber risk to delivery due to bringing Route, IP & SC together and enabling a smooth work flow into year 1 of CP6 and avoiding the drop off of work that occurred in year 1 of CP5.
8	Supply chain and partners need to be engaged early	Better use of in-house capability including joint office with our in-house design group. Changing our contracting methods to leverage economies of scale associated with national contracts where appropriate and cultivate local supply chain investing in businesses across Wales and Borders.	Supply chain partners have been engaged and are feeding into our plan to adequately resource the work bank throughout CP6.		Shown as an amber risk due to challenging national frameworks.
9	Improved approach to access	Build engineering possessions requirements in to the access requirement of Transport for Wales and to meet requirements of FOCs.	This was raised as a Transport for Wales franchise requirement to align planning and access.		Shown as an amber risk. Currently liaising with TfW to confirm requirements.
10	Need to align schemes with both the enhancements planned for the route and schemes in development/ under consideration by other stakeholders	We will be focusing more effort into third party schemes and collaboration with developers e.g. Cardiff Parkway development, as this could also lead to match funding opportunities	The business development director is leading on opportunities to generate income, we are sharing our renewal plans with Welsh Government and Transport for Wales to align work.		Shown as a red risk due to the uncertain nature of securing third party investment schemes aligning with our own work bank.

d. How do stakeholder priorities link to our short and long-term route objectives?

Delivering for the passenger and our stakeholders is at the heart of our mission to run a safe, reliable, affordable and growing railway. We have listened carefully to our stakeholders to understand their views and our proposals are designed to meet our collective objectives for the railway, within the funding available. Our plan has the support of Welsh Government and is the result of regular engagement between Transport for Wales, our train and freight operating customers and passengers. This is reflected in our short-term objectives - measured chiefly through our route scorecard - and focussed on key areas highlighted by stakeholders including train performance, collaborative industry working and delivering value for taxpayers' money.

Our longer-term objectives, as outlined in our plan for operations, maintenance and renewals for CP6 are also closely linked to stakeholder priorities, including investment to improve asset reliability, a range of diverse schemes across the route that will directly benefit passengers, and significant additional investment to improve resilience in extreme weather.

e. Ongoing engagement

Ongoing engagement with stakeholders will be vital as we move from planning to implementation. We plan to hold further workshops with stakeholders in 2019, building on the approach that supported the development of our CP6 plan. We will also continue our engagement on CP6 at the now established Transport Leaders Forum, which meets quarterly and brings together a group of senior stakeholders from across government, business and the Welsh public realm for strategic discussion on key industry issues that shape our business priorities and highlight opportunities for collaboration across the transport sector and beyond.

At a more tactical level, the Joint Communications Board - involving Network Rail, the lead operator and Welsh Government - meets periodically and will support the day-to-day cross-industry working stakeholders have identified as an ongoing priority. Meanwhile our regular drop-in sessions at the National Assembly for Wales and events at Westminster will support CP6 engagement with assembly members and members of parliament and CP6 will remain a key theme of the ongoing engagement with stakeholders across the route with other partners, including Community Rail Partnerships and Rail User Groups. Lineside neighbour engagement is also key and community drop-ins will provide an opportunity to discuss local CP6 schemes as well as our wider plan for the Wales and Border network over the next Control Period. Route stakeholder newsletters will provide an opportunity to keep stakeholders updated on progress throughout CP6, as well as our Annual Stakeholder Report. Our annual stakeholder perception survey and annual Assembly Members survey will allow us monitor and respond to changes in stakeholder perception and favourability through CP6.

Appendix B   Assumptions Log

Ref no.	Topic	Assumption	Areas of spend impacted
A.1	Boundary Change	The potential transfer of ownership of the core valley lines network has not been accounted for in the Wales route strategic plan.	All assets
A.2	Franchise Change	Volumes within the route strategic plan are derived on the basis that the new Transport for Wales franchise is materially unchanged from the existing agreement and doesn't consider any potential train service requirement changes arising from the re-franchise.	All assets
A.3	Re-signalling works	The overarching plan for the route is: 1. Port Talbot West (phase 2) which will see the closure of Port Talbot Panel and control of the railway westwards to Ferryside or Carmarthen transferred to the Wales Railway Operating Centre (WROC). This is planned for development in CP5 for delivery in mid – late CP6. 2. Life extension schemes in lieu of Modular Signalling schemes to maintain current operational capacity.	All assets
A.4	Track criticality	The plans have been developed using the revised CP6 Track Criticalities by Strategic Route Section (SRS) and latest Track Categories (issued May 2017).	All assets
A.5	Level crossings	The level crossing portfolio is included within the signalling renewals submission.	All assets
A.6	Access	Any opportunities that can be gained through the engagement with TfW will be dependent upon other routes, FOC and TOCs agreement and will need to align with the national timetable and existing possession planning within the route. Additionally, it is assumed that track access will not materially change due to the introduction of the IET fleet.	All assets
A.7	High output delivery	Volumes have been packaged in the plan on the assumption that delivery by the high output team will be in campaigns similar to those delivered in CP5 with an emphasis on mid-week delivery where practicable. Acceptable track access windows are subject to consultation with the TOCs and FOCs. Anticipated minimum midweek eight-hour possessions (protection and isolation time on top) and 10 hours weekend (protection and isolation on top)	Track assets

Ref no.	Topic	Assumption	Areas of spend impacted
A.8	Overhead line equipment	The strategy is based on the delivery of a series 1 overhead line equipment solution on route sections 8&9 from the boundary to Cardiff, due for completion in year 1.	E&P assets
A.9	Wales railway operating centre	The Wales railway operating centre is known to not meet the minimum standard requirements. The capacity for the building has not been confirmed to meet the space requirements for electrification and digital railway. Considering this represents a risk until the optimal resolution is developed.	Renewals
A.10	On track plant	It is assumed that suitable plant will be available in enough quantity to deliver S&C heavy refurbishment (re-ballasting in-situ) in CP6.	Track
A.11	E&P renewals	No renewal of points heating associated with re-signalling schemes as it is assumed that these can be re-used and re-connected.	E&P / Track CapEx
A.12	Level crossing surfaces	Level crossing lift and replace will be increased to maximise the effectiveness of on track machine treatments on the overall 1/8th track geometry readings.	Track/ off-track & signalling
A.13	Access roads	Wales Route have several access roads within the asset portfolio; these often provide access to third party properties as well as access to the railway. As with all assets these require works to maintain their condition, an assumption has been made to the length of road as asset information is poor.	All assets
A.14	Access points	This asset has been neglected over several control periods and many are not fit for purpose. A renewal/refurbishment plan is therefore required to improve workforce safety and reliability. The costs within the plan (£1.3m pa pre-efficient) assume that improvement work can be undertaken at circa 43 access points per annum with the cost being based on CP5 average unit rate.	All assets
A.15	Vegetation works	The Wales route vegetation strategy includes a significant quantity of vegetation management to achieve a compliant position. The plan assumes that track access (particularly for flailing plant) is available as planned and not restricted especially given that access for off-track work on this scale has not been requested before.	All assets
A.16	National habitat compensation project (NHCP)	The operations, maintenance and renewals budget with the Wales route strategic plan do not accommodate any change of asset use to provide sea defence, or habitat replacement in locations where managed retreat has been identified as a long-term strategy by Natural Resources Wales (NRW). Any changes are viewed as enhancements to	All assets

Ref no.	Topic	Assumption	Areas of spend impacted
		the infrastructure, and so would fall outside the scope of this document. Network Rail is working to understand the implications of this potential issue via our memorandum of understanding with NRW.	
A.17	Drainage	The CP6 Plan includes drainage improvement in the Severn Tunnel based upon the assumption that access is available to undertake this work.	All assets
A.18	Buildings portfolio – managed stations volume and budget	No franchised stations will become NR Managed Stations during CP6: There has been no provision for Managed Station maintenance, renewals or Asset Management resource on the Wales Route during CP6. Allowances for these budgets would be required in the event of any stations within the route changing from Franchised to Managed Estate.	
A.19	Operational property – light maintenance depot (LMD)	Landore LMD will be leased to a 3rd party, reducing the risk of trespass and vandalism on a large site which the route is scheduled to inherit from Western route following the expiry of GWR lease on 31/03/19. Should a third party lease not be in place, the route will be responsible for the security and maintenance of a large vacant LMD which will be a target for trespassing and vandalism.	
A.20	Operational property – franchised stations	Franchised Stations will remain on traditional leases to one TOC: Any changes to the operation, inspection or maintenance arrangements at franchise change would impact on annual costs. A consistent interface with one operator is also assumed.	
A.21	Safety	Funding to meet the implementation of the Environment and Social Performance Policy or the ten key social performance outcomes is included within the core submission.	
A.22	Third party constraints	Certain works will need consents and funding agreements from third parties, e.g. Environmental, Listed Building, BG3, etc. Assumed that all consents will be gained to meet timescales for delivery of volumes.	Structures assets
A.23	Volumes	It is assumed that the structures that are planned for renewal due to Level 1 Policy requirement intervention (e.g. strengthening to meet the required capability) will also have any Level 2 policy volumes carried out as part of that renewal (e.g. Repair/Preventative) to maximise delivery efficiency.	Structures assets
A.24	Safety	A budget at £91,000 per year has been included and agreed, currently in submission.	

Ref no.	Topic	Assumption	Areas of spend impacted
A.25	Coastal, Estuarine, and River defence	No national policy so volumes based on current information. Further development of the work-bank will be on-going as understanding of risks from climate change and how to manage the resilience of the railway improves.	Structures assets
A.26	Business critical rules	To complete the assets that have not been aligned to BCR within CP5 funding will continue to be supplied from safety technical and engineering. The implications of this change initiative have not been quantified, and therefore have not been accounted for in this submission.	All assets
A.27	Safety	Funding to meet the requirements of new legislation introduced into Wales (e.g. Environment (Wales) Act 2016) has been included within the core submission.	
A.28	Community rail	Where reference is made to the development of community rail leases, the current process relies on enough human resource being available off route in the freight property team centrally. The route doesn't have the technical expertise to progress this lease internally as 'Wales route'. We brief lease schemes that they will be charged for the time of the freight team, but the freight property team also have their substantive responsibilities to manage, of which community rail isn't one of those responsibilities.	
A.29	Electrification to Cardiff	Reduction in track access between boundary and Cardiff due to additional isolation requirements impacting possession length. It is assumed that this reduction will lead to ~20% less productive time than currently experienced for many track / lineside maintenance activities.	OpEx / All assets
A.30	Asbestos	There has been no allowance for the removal of asbestos in CP6 except for buildings.	All assets except for buildings
A.31	OpEx	The basis of OpEx assumption is CP5 exit with major strategic asset management changes noted and considered, including electrification. Costs have utilised the ABP tool for both Cardiff and Shrewsbury DU	All assets
A.32	Impact of the Digital Railway programme on track	While in the long term, digital railway deployment is expected to include plans for Wales route, this is not in the life of the current route strategic plan, so no track volume has been built into the track plan beyond that which is reasonably foreseeable as being needed to support conventional re-signalling (described in A.3).	

Ref no.	Topic	Assumption	Areas of spend impacted
A.33	Unit Cost (Geotech)	The unit costs used in the submission are based on a combination of National figures derived from CAF data and route unit costs obtained from schemes delivered in CP5.	
A.34	E&P Unit Rates	It should be noted that where possible the latest IP unit rate book has been adopted. Where these revised rates have not been provided locally delivered rates have been used where better route knowledge exists like Severn Tunnel pumping.	E&P
A.35	ECRO support	It has been assumed that ECRO support for Electrification to Cardiff will be covered by Western Route throughout CP6.	Electrification
A.36	CEFA Asset Count	This submission is based upon a change in asset count for Electrification, although there is an appreciation that improvements in asset data quality will see numbers increase.	Electrification Asset Data Quality
A.37	CEFA & Electrification	The impact upon CEFA activities under or adjacent OLE has been considered within this submission although it only affects a relatively small number of assets with electrification only going to Cardiff.	Electrification
A.38	Electrification Manpower	The plan assumes that the output of the safer faster isolations work stream will be completed before EIS on the Wales Route.	Electrification OpEx
A.39	Extreme Weather Events	The plan assumes that there is no allowance for Extreme Weather Events in the plan and that the works to reinstate the asset will be funded from a central contingency pot and not from the Wales Route budget.	All assets
A.40	TOC Fleet	Performance analysis has assumed that the fleet in the new franchise remains in a maintainable condition.	
A.41	On Track Machines	Is it assumed that suitable and sufficient tamping / stone blowing resource will be available from the supply chain post the award of a new contract by Route Services.	
A.42	Volumes	Track volumes are below the Centre modelled volumes achieving a cash constrained target. The net effect of asset age and performance will see deterioration throughout CP6 and future control period unless additional funding is obtained in CP7 and beyond.	Track

Ref no.	Topic	Assumption	Areas of spend impacted
A.43	Port Talbot Re-signalling	Track maintenance volumes in Cardiff delivery unit to consider that this project is completed as anticipated in Year three of CP6.	Track
A.44	Port Talbot Re-signalling	Development of this scheme is well underway but still undefined. The assumption is that the reduction in signal equivalent units will fund resulting works in other assets that are affected but the route will need to review when GRIP3 report is completed.	Track
A.45	Energy Performance	There are currently no works planned to increase the Energy Performance of the franchised estate as the route is in the early stages of assessing its portfolio. The energy efficiency of the portfolio is therefore currently unclear. The Wales and Borders refranchise would be the first required to meet minimum energy efficiency standards (MEES) criteria under the Energy Act 2011, this is a clear risk to the route and has been included as a headwind in the buildings portfolio.	Operational property
A.46	Accessible Stations	Application of the Department for Transport's code of practice for accessible stations is also a headwind within the buildings portfolio as the requirements for many of the schemes proposed in CP6 are currently unclear until diversity impact assessments are completed for the proposed schemes.	Operational property
A.47	Track contracting strategy	Plain line and S&C contracting strategy for CP6 are confirmed such that new commercial arrangements are in place.	Track
A.48	LTIFR metric	Adjustments will need to be made to the definition that Network Rail use to determine lost time incidents in CP6. These adjustments will better provide a level playing field with lost time incidents measures used by other global industries.	Scorecard measure
A.49	Accessibility at stations	The operational property plan does not allow for upgrades to stations for accessibility where maintenance interventions are planned.	Operational property

Appendix C   Route context

The rail network in Wales and Borders serves a diverse range of markets, from long distance interurban flows to significant daily commuting to Cardiff and Swansea and, to a lesser extent, Wrexham, Newport, Shrewsbury and Hereford. It also includes the western end of the Great Western and London North Western 'intercity' main lines which facilitate travel to England and Scotland. There are also several rural markets and considerable freight flows, both within Wales and cross-border.

In total, the route covers some 923 route miles and 1,545 track miles. On Mondays to Saturdays, around 1188 passenger services run on the route per day and there are around 32 million rail passenger journeys in Wales every year.

Wales Route is divided in two delivery units, Cardiff and Shrewsbury, with track categories a mix of criticality bands from 1 to 5 with the higher criticality 1 being located between the Severn Tunnel and Severn Tunnel Junction. The CP5 criticality map for Shrewsbury and Cardiff delivery units is presented below.

Wales is well connected to the national network and there are strong cross-boundary markets for travel to and from England. The railway is vitally important to the economy in Wales and the border regions.

In Wales, there has been significant growth over the last 10 years with 46 per cent more journeys made and this keeps growing (graph below). Wales is well connected. Funders and the railway industry have invested in more capacity and more services to meet growing demand. This is at the heart of the success story. The railways in Wales serve different markets and this contributes to a rich and diverse baseline.
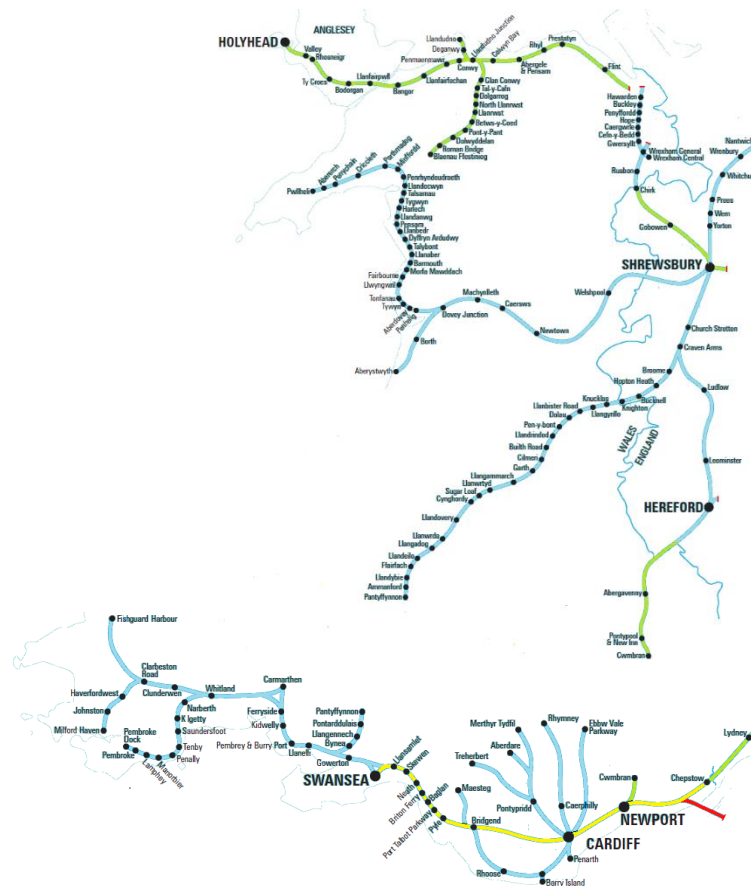
Appendix D   Scenario planning

CP6 strategic investment options

Since the start of the CP6 business planning process additional funding has been provided to the Wales Route through the release of central risk budgets. Rather than investing this money into the assets that were able to bring forward activity into CP5, the money has been distributed between investment options that had been identified in previous CP6 submissions within Appendix D. This adjustment of our plans highlights the routes commitment to delivering this additional activity, and the lists below have been reduced to reflect this change.

The Wales Route will hold £89m of funding that will act as a risk fund to protect against unforeseeable financial pressures that are outside of our capacity to accommodate within the operations, maintenance and renewals route submission. Should these risks not materialise within the control period this will provide the opportunity for the route to release funding to invest in the options we have outlined within this section.

To add clarity, the list of investment options has been prioritised within the table below:

Benefits by investment prioritisation
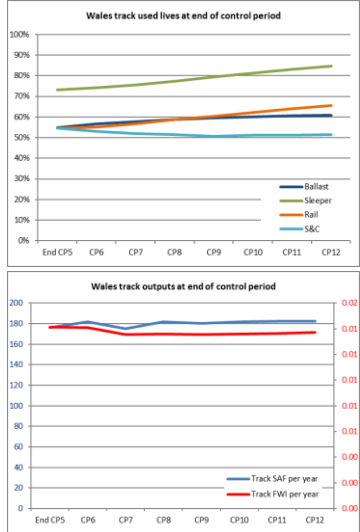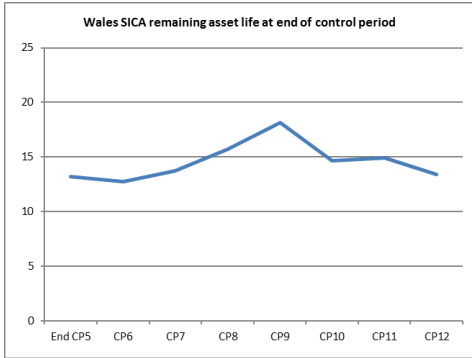
Rank	Description	Qualitative impacts	Quantitative impacts
1	Legislative compliance: Removal of asbestos (£1.3m)	Improved workforce safety, enhanced reputation.	Removal of 50% of lower risk ranked yellow sites. OpEx savings in inspections approx. £100k per annum. Reduce risk of delay through critical equipment rooms being inaccessible in the event of a suspected contamination.
2	Safety: Further removal of high risk non-compliant platform cross fall (£2.25m)	Improvement in passenger safety. As accessibility improves across the network, there have been an increased number of incidents where wheelchairs or pushchairs have rolled off station platforms onto the track. Many older platforms require significant works to remove the risk of non-compliant crossfall. Risk mitigation plans have been implemented in CP5 and CP6, although this does not remove the risk completely.	Reduction in number of safety incidents on stations. Reduction in delay caused by incidents of people on the line.
3	Performance and Resilience: Increased Under-bridges and Overbridge volume (£5m)	Reducing potential performance impacts of asset failures/issues by intervening at the right time. Also ensuring high priority overbridges meet liability requirements.	Increased underbridge and overbridge volume. Improved capability and condition of assets ensuring increased number of policy compliant assets.

4	Safety: LX Package 1 & 2: Targeted closure in CP7/8 for Beavers Hill, Manorbier Newton, Newcastle Road, Shrewbridge Road, Harlescott and Craven Arms level crossings. (£2.45m)	Newcastle and Shrewbridge Road are high risk with high usage by children walking to and from school or the local park. Newcastle will be replaced by a road bridge and Shrewbridge Road will be closed for vehicles and scoped for a footbridge replacement. Feasibility study/crossing = £30k which includes road traffic surveys/topographical surveys and diversity impact assessments. Other costs include Liabilities and Project costs – Sponsor OR Development manager through Grip 1-4. CP6 costs are for development only with local highways. Closure scheduled for CP7/8. Benefits: Vulnerable users risk removed. 8th &11th highest risk crossing on the route. Significant developmental work planned in CP6. High level of confidence that closure will be achieved in CP7/8 subject to funding.	Current FWI (0.0273) reduced to (0) in CP7/8
		Beavers Hill and Manorbier Newton are open crossings on the Pembroke line. One is in the centre of a village and there have been two collisions at the other within the last 12 months. Although not high risk there is an opportunity in the route to divert these two crossings to a nearby road over rail bridge which is planned for renewal. The route seeks to replace the level crossings with the appropriate road or ramped/stepped footbridge. These level crossings are for development in CP6 with local highways. Feasibility study/crossing = £30k which includes road traffic surveys/topographical surveys and diversity impact assessments. Other costs include Liabilities and Project costs – Sponsor OR Development manager through Grip 1-4. CP6 costs are for development only with local highways. Closure scheduled for CP7/8. Benefits: Vulnerable users risk removed. 86th and 52nd highest risk crossings on the route. Significant developmental work planned in CP6. High level of confidence that closure will be achieved in CP7/8 subject to funding.	Current FWI (0.0067) reduced to (0) in CP7/8
		Harlescott OD level crossing on town road with high traffic levels and problems with blocking back; significant retail development completed in that area. The route is working with Shropshire Council to close as part of a wider scheme to improve traffic flows around the county town. This will require a pedestrian bridge to facilitate closure. CP5 survey works completed in with Council to review. Development of project continuing during CP5 and into CP6 with vehicle closure in CP6 and full closure early CP7. Requires work to signalling system to remove asset. Benefits: Performance risk removed, improved vehicle traffic flows and benefits to local businesses. Maintenance risk reduction. 47th highest risk crossing on the route. Significant developmental work planned in CP6. High level of confidence that vehicle closure will be achieved in CP6 and full closure in CP7 subject to funding.	Current FWI (0.004322) reduced to (0) in CP7

		Craven Arms MCB level crossing adjacent to A49 with high traffic levels leading to an industrial estate. This will enable the expansion of the industrial park adjacent to the railway as part of the local development plan for the area. A vehicle bridge is required to replace the crossing and a nearby public footpath level crossing. Work is in partnership with Shropshire Council and local business user to match fund. Benefits: Rail derailment risk removed, improved vehicle traffic flows and significant benefits to local businesses. Maintenance risk reduction. 112th highest risk crossing on the route. Significant developmental work planned in CP6. High level of confidence that vehicle closure will be achieved in CP7 subject to funding.	Current FWI (0.0017) reduced to (0) in CP7
8	**Performance and Resilience: Black bridge flood mitigation – study only (£1m)** **Weather Resilience: CERD's Study (£1m)** **Safety: LX Package 3: Removal of further 25 passive level crossings with OSML (£3.75m)** **Asset life cycle and obsolescence: Workplace Improvements (3.2m)**	Reduce likelihood of flooding by increasing the height of the structure (which is the low point along that section). This would include altering the vertical profile of the track substantially.	Track and structures volume, reduced performance issues along the section that are caused by flooding annually
		An in-depth study into the improvement requirements for coastal assets to reduce risks of overtopping and assure their capacity to cope with climate change.	Reduced performance issues due to weather events that effect sections of the network adjacent to the coastline.
		The route seeks to reduce the risk on all passive vehicle and footpath crossings focussing on high risk locations, trains in long sections and sighted only. For all passive crossings closure will be the preferred option with conversion to OMSL the secondary option. Remaining crossings will be upgraded with overlay miniature stop light at suitable locations. Fifteen are planned for CP6 with the potential to increase this number dependent on risk fund release. Cost per crossing to install OMSL = £150k +.	FWI reduction where OMSL fitted.
		With the devolution of workplace management, the route has the responsibility to provide workplace provisions across its corporate offices, Maintenance Delivery Units and Signal Centres and boxes. Funding to focus on improvements in these areas will result in improved workforce health and wellbeing and enhance reputation.	
9	**Safety: Fencing Renewal Plan (£10m)**	Currently the fencing renewals work-bank is growing at a greater rate that the funding allows and therefore many of the sites requiring renewal are failing, in many cases this leads to animal incursion, this poses a safety risk to the passage of trains. There have been many examples over the last control period of incidents involving animals on the line, many of these have led to derailment. The current plan for CP6 allows the Wales Route to start reducing the backlog in the work-bank as well as dealing with the constant flow of new proposals. However, the advent of the paperless asset inspection system (MyWork App), has improved the data quality and feedback from the inspectors. This extra funding will have a marked difference in the number of animal incursions experienced on the route by the end of CP6. This work will reduce the risk of a train striking an animal and reduce derailment risk.	This work will result in safety, performance and sustainability benefits. Analysis of the data indicates that the funding will result in a sustainable position by the end of the Control Period, such that by CP7, the work bank will only comprise of sites identified for renewal in the latter part of CP6.

10	**Performance and Resilience: Demolition of redundant lineside buildings (£1.25m)**	Potential reduction in delays due to safety incidents, trespass, arson. Improved image and reputation and promotes tidy railway and improves lineside relations.	
11	**Performance and Resilience: Major structure – Britannia bridge Study (£2m)**	Intervening at the right time on a critical asset in the route. The bridge is currently owned between Network Rail and the Welsh Government and due to its location access is a major issue. There is evidence of deterioration to both the rail and highway decks and the paint system is deteriorating in a number of places.	Intervention at the right time will remove the risk of corrosion and further deterioration which could significantly expand the works required to the structure. The structure is also listed so we would be open to prosecution should the condition reduce to an unacceptable level.
12	**Asset life cycle and obsolescence: WROC Spatial Requirements (4.5m)**	WROC does not comply with national ROC specification in various areas including physical security measures to access the building and its functions. Additionally; an increase in the number of staff based in this facility means there is limited welfare and space provision at this location.	
13	**Legislative compliance: Treatment of Japanese Knot Weed (1m)**	The treatment of Japanese knotweed as per our legal obligation, this increased funding will allow the route to step up from managing the reputational risk sites allowing us to tackle the growing problem of this invasive species taking a hold of the Wales Route operational estate and therefore avoiding the risk of legislative action against the business. JKW also has a profound impact on our overall delivery plan and significantly impinges on our ability to deliver projects in a cost-effective manner across disciplines.	
14	**Asset life cycle and obsolescence: Track Circuit conversion West Wales (£3m)**	Conversion from obsolete and scarce Aster track units to modern, reliable axle counters. The Aster TCs are multi-track systems which take significant resource to trace faults. Provision of an axle counter system will provide fault resilience and make a big safety improvement by reducing the amount of trackside work needed by staff undertaking quarterly maintenance and faulting duties.	Replacement of qty x 28 Aster track circuits will remove the need for quarterly servicing and replacement of failed units.

Appendix E Long Term Forecast

Asset	Condition trajectory	Comment
Track		During CP5 and into CP6 the percentage life used of the Wales Route S&C will fall principally due to the completion of the CASR, North Wales Coast and Port Talbot West (Phase 1) re-signalling schemes in CP5. The Newport – Shrewsbury re-signalling would have also affected a further reduction, but this has now been abandoned. The CP6 S&C programme, which currently comprises condition driven domestic renewals, is insufficient to sustain the reduction in service life used and from mid-CP6 the service life used for S&C will start to rise. For the other key components of the track asset (rail, sleepers and ballast) the percentage life used will rise as was predicted by the CP5 plan. There is a small potential to reduce the S&C used service life in CP6 through efficiencies and track rationalisation in the Port Talbot West Phase 2 re-signalling project. The scheme is currently in development and has not currently been included in the long-term forecast. Discounting this potential reduction, in all cases the RF6 constrained plan, with the associated reduced volume of work leads to a bigger increase in service life used; an effect that becomes more apparent when the current volumes of work are projected into future control periods. To an extent this rise in service life used is an effect of Track Asset Policy. With the exception of the route from Pilning to Swansea which is Criticality Band 2 in CP6 the remainder of the Wales Route is Criticality Bands 4 and 5. Track Asset Policy dictates that lower criticality track is sustained by a strategy based on refurbishment rather than renewal thus the without the clock being reset by renewal the percentage of asset life used will, in general, increase. The implication of this increase in service life used is the performance of the track assets (measures in terms of Service Affecting Failures (SAF) and Fatality Weighted Index (FWI)) will not be sustained. These will manifest as condition of track speed restrictions and broken and defective rails. It must be born in mind however that the track asset has only a small impact on performance (0.16% of PPM at Q4 of 16/17) so the impact on the overall Wales route performance will be small.
Signalling		The baseline would have seen an improvement in signalling asset condition from the end of CP6 through to mid-CP9 due to re-signalling schemes and the introduction of Digital Railway (DR) ETCS L3 with the need for only limited life extension works. The condition of assets would remain manageable as areas not subject to re-signalling would be maintained by focussed renewals in smaller areas until DR. Following DR intervention there would be a steadier decline as the assets would be of a similar age. The decline in condition could then be managed evenly across the Route. The pattern of asset condition within the constrained work bank shows the marked contrast in asset life as infrastructure degrades prior to the introduction of DR. This is due to a reduction in the number of mechanical area re-signalling schemes and the reduction in available funding for life extension works and general minor works. In addition, there are significant concerns for level crossing renewals where reduced funding means that less of the level crossing estate can be renewed each control period. This can only be mitigated by undertaking less work on other signalling infrastructure or by supplementary funding bids. Post DR intervention indicates an improvement in asset life until the DR equipment itself becomes aged or obsolete as is inevitable with computer-based systems. The timing of ETCS L3 in CP8/9 is based upon the last known train fitment plan and rollout is not yet confirmed. The long-term consequence for this option is deterioration in performance until DR intervention which is expected to make an improvement until asset condition degrades once more. For all scenarios the introduction of ETCS L3 will be dependent upon a positive business case combined with an integrated delivery

Asset	Condition trajectory	Comment
		assessment for national rollout and confirmation that the train fitment plan is robust.
E&P	Wales E&P % asset remaining life at end of control period	The SPS baseline figure shows a slow managed reduction in average asset age life after CP8 from the completion of what is assumed to be Signalling power renewals in CP6 &7. This is consistent with Digital railway as it is unknown at this stage how power is to be provided lineside it is anticipated not as distributed lineside infrastructure.
		Whereas the RF2+constrained shows a slow gradual reduction of average asset age from the end of CP 5. Worryingly the expenditure graphs appear to make no cognisance of the fact that at some time in the next 3-4 control periods Sudbrook Pumping station will require a major refit at circa £60m in today's money.
Structures	Wales % bridge PLBE in poor condition at end of control period	The Wales Route is recognised as having the highest percentage of bridge PLBE in poor condition across all the Routes. We have experienced an increase in the percentage over CP5 and expect this to continue over CP6 with the constrained budget.
		The graph shows this higher percentage of poor assets however it has assumed a ratio of the CP6 budget is allocated to addressing the number of poor PLBE whereas this ratio is lower within the Wales Route due to the need to focus on specific risks such as Tunnels and CERDs. Funding and volumes are similar in CP6 compared to CP5 however there will be more maintenance and less renewals works. We are also carrying out a major 'one off intervention' to Barmouth Viaduct. Taking account of these and other budget allocations mean that the more likely graph will show a gradual increase in the % of poor PLBE that will be managed through increased maintenance activity

Asset	Condition trajectory	Comment
Earthworks	Wales earthworks outputs at end of control period — Earthwork condition score (ECS), Risk score	The baseline sees by the end of CP12 that there is an overall projected 13% increase in earthworks condition score (indicates deteriorating asset condition) which results in Wales Route recording the worst condition score of all the routes by the end of CP12. This scenario also sees a similar increase in the route risk score between the end of CP5 and CP12 compared to the national average risk score increasing by only 5%. Whilst this scenario manages the national condition and risk score in a sustainable manner, the implications to the Wales Route are a likely increase in earthwork failures with associated increased risk to safety, performance and reputation. The constrained scenario suggests that by the end of CP12 there is a significant increase (17%) in earthworks condition score (indicates deteriorating asset condition) which results in the Wales Route recording one of the worst condition score of all the routes by the end of CP12. This scenario also sees a 32% increase in the route risk score between the end of CP5 and CP12 which is aligned to the national score increase. This scenario demonstrates that the current risk management of earthworks is unsustainable nationally and by route. The implications to the Wales Route are an increase in earthwork failures (above the baseline scenario) with associated increased risk to safety, performance and reputation.
Operational Property	Wales Ops Property condition at end of control period — Weighted PARL, PARL<20%	Percentage Asset Remaining Life (PARL) across the operational portfolio is predicted to decline slightly during CP6. This is reflective of the approach to intervene on block types on a prioritised basis to meet funding requirements; with renewals during the control period focused on Footbridges, Canopies, Platforms and electrical items, as these items have the biggest impact on Safety, Performance and Reputation. Remaining block types such as buildings and waiting shelters will be maintained via reactive and minor emerging works budgets throughout the control period. Platform volume has been reduced overall to fund a one off larger, complex platform rebuild. This is expected to further reduce overall asset condition as fewer interventions are carried out across the portfolio.
CSI	Wales CSI at end of control period — Baseline, Constrained	CSI is projected to deteriorate 1.7% to the end of CP6 at which point baseline sustainability decline is maintained at an average of 0.2% per control period until CP9 where the decline increases to a rate of 1.5% per control period. The constrained scenario of spend will see far greater levels of decline at a rate of 1.9% per control period, with a plateau in CP9 to CP10, at which point the decline will return at the previous rate. CSI should be considered at a national level, and Wales Route does track well against the national trend until CP9, at which point the route experiences an increase beyond the national reduction. This increase in sustainability deterioration post CP9 presents a future concern for the route and will require further interpretation to smooth line future funding to avoid the need for significant investment to reverse this worsening trend post CP12. It is felt that the implementation of Digital Railway within this timeframe will assist in the smooth lining process, but details over this timescale are currently in development.

Appendix F Wales Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the Wales and FNPO routes will work together to deliver the Route Strategic Plan for Wales and Borders. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.
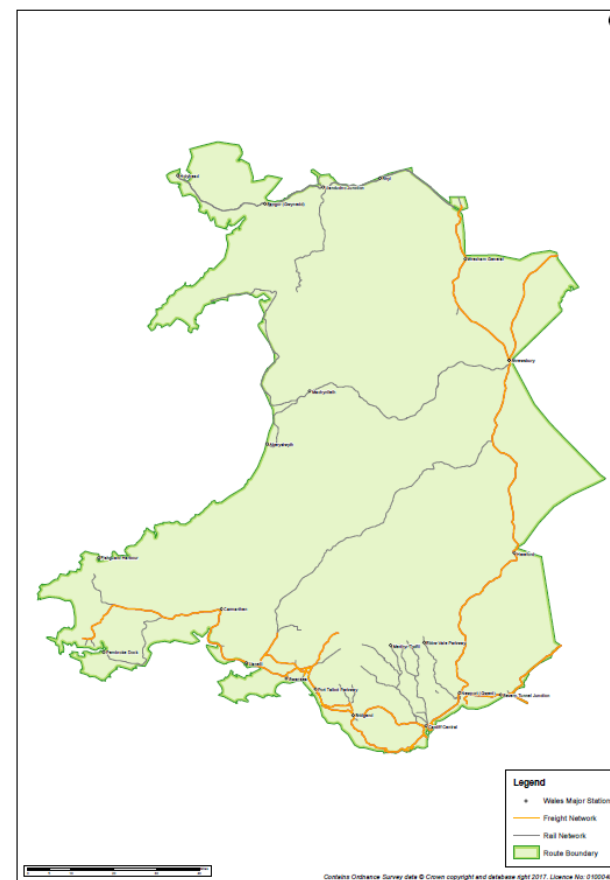

National Passenger Operators:

Cross Country is a regular user of the Wales route and key issues include right time improvement for services arriving and departing Cardiff, as well as operational resilience around Cardiff.

Charter trains also operate across the Wales Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.

Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from quarries in Wales and South West R: Infrastructure not able to cope with traffic demand	• Explore opportunities for longer and heavier trains maximising loco capability • Support the introduction of new wagons that maximise payload/length ratio • Support Terminal and Yard developments when identified • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Develop the inbound movement of aggregate and spoil from Cardiff Docks
2	**Domestic & Deep Sea Intermodal Growth** O: Volume growth from Ports / Terminals (Felixstowe, London Gateway, Southampton, Liverpool) will feed into Wentloog R: Train paths and SRT discrepancies with longer, heavier trains R: Gauge enhancement to Wentloog does not go ahead	• Work with customers to maximise opportunities to increase length of trains • Increase Average Journey Speed origin to destination • Recognised Diversionary routes with adequate capability, review of the Vale of Glamorgan to see if any improvement feasible beyond W6 • Explore the opportunity for a terminal development on the Llanwern site in conjunction with Tata

No	Key Challenges, Risks and Opportunities	What we plan to do
3	**Commodity Traffic Growth** O: Tata to source more coal from UK sources O: Growth of finished steel to EU via rail O/R: Coal burn at Uskmouth may be replaced by Biomass O: Steel traffic increase as Liberty Steel expansion continues including inbound scrap movement if arc furnaces reinstalled R: Cwmbargoed coal traffic could be impacted by Cardiff Metro development	• Explore opportunities for longer and heavier trains maximising loco capability • Terminal / Yard developments to support traffic growth where possible • Incorporate heavy freight requirements into Cardiff Metro plans • Work with stakeholders to assess feasibility of re-instating rail link into Liberty site in Newport
4	**Franchise changes** R: Refranchising of TOC in Route seeks greater capacity on shared lines	• Retain adequate capacity, capability and flexibility for existing and forecast freight • Review Impact on possession strategy from new flows • Review stabling plans for new rolling stock / change of locations
5	**Construction projects** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction O: Site clean-up at Port Talbot may generate spoil movement opportunity	• Work with FOCs and End-customers to offer solutions to demands of major projects e.g. M4 relief road at Newport, Swansea Bay Tidal Barrier • Terminal / Yard developments ('pop-up' terminals / lineside loading potential) e.g. Swansea Burrows
6	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity • Work with System Operator to support funded early stage timetable work for SRFI developers
7	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Tata, Celsa and Liberty House)	• Work with end-customers to develop business growth and support modal shift to rail • Work with end-customers to strengthen service delivery and support • Work with FOCs to investigate wagonload possibilities (shared services) for multiple customers
8	**Review of redundant and unused assets** O: Following traffic changes in CP5 and structural change in energy market, opportunity exists to review size and organisation of non-passenger network	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets (actual v published) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment
9	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis, • Working with Routes and customers to establish and benchmark walking route use and condition • Liaise with DBC to focus on critical interfaces at Margam and Llanwern
10	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage • Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)

11	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors		• Act as internal client on behalf of freight to build sympathetic capability for freight traffic needs		

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and walking routes conditions.	• Rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites, including Cardiff Tidal Pengam, East Usk, Margam Knuckle Yard and Llanwern in place. • Complete review of authorised walking routes/crew change locations per customer • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published annually during CP6.
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Forum created. Regular quarterly meetings arranged.
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups (e.g. South Wales corridor) • Use of Control Rooms and Visualisation at major sites (e.g. Margam Knuckle Yard) • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal engagement
	Measuring FDM and FDM-R	Focus on defined key routes: - Asset Performance - Asset Resilience - Effective contingency plans	• Target FDM-R Route target for end CP6 of 94.4% • Input to Route CP's for consistent application of freight contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers

Section	Key Themes	Strategy	Specifics	Owner	Timescale
	Joint Freight Performance Improvement Strategies	Agreed joint strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements. • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for Gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors • Robust gauge cleared diversionary routes, for example for containerised traffic departing Margam • Transparent network capability per route for customers	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement • Work with Stakeholders to target specific flows and services • Annual plan in connection with annual timetable change	FNPO Head of Performance/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections where required • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth, e.g. Liberty House connection on the Birdport Branch line • Advice to System Operator of future sites and flows to understand timetable and capacity impact • Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ System Operator	Ongoing

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers. • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors • Look for opportunities within the Cardiff Metro development to enhance freight's opportunities	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018

Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into
		• Engineering Access Statements
		• Access Planning Requests
			• Engineering plans that are;
			  • Transparent and well understood
			  • co-ordinated
			  • consistent across Routes
			  • planned well in advance and
			  • take into consideration contingency arrangements for long distance services
				SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Access process

Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Use appropriate standards in use at each location. • Communicate any changes in market demand.	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018
	Review of Locomotive and Heavy Axle Weight (HAW) restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed.
	Review Freight Only lines and other infrastructure	Understand the potential to reduce OMR.	• Review based on existing & predicted future use • Input into track/structures/maintenance plans • Outputs to be agreed with customers/ORR • Close scrutiny on the impact of Valley coalfields decline e.g. Cwmgrach and Hirwaun branch lines • Gaerwen to Amlwch branch status to be reviewed, also the Waterston branch	SRFM/ Route COO/ RAM	Definition of Review by Dec 2017. Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Continue to work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them	SRFM/ Route COO/ RAM	Periodic review of performance impact of TSRs to be agreed by Route

Appendix G Supporting strategies

Corporate Communications

We will secure a material improvement in our reputation with our stakeholders. Our scorecard metric for communications will achieve a year-on-year reduction in railway work complaints. By achieving this, Wales and Borders Route and by extension Network Rail will have secured a material improvement in its external reputation. Our integrated all-channel strategy will help the communications team achieve this and we will support the strategy by embedding a one-team culture, retaining the best talent and improving business performance.

Our bi-annual stakeholder perception audit will give us robust insights into the quality of our relationships with a wide range of stakeholders and enable the route to target areas for improvement. Our quarterly e-newsletter, targeted emails and annual stakeholder report, as well as the Transport Leaders' Forum will keep our stakeholders up to date our progress on improving the Wales and Borders network.

We also want to live and breathe our commitment to work together with customers and stakeholders through joint working, closer collaboration and proactive communication. We aim to build strong, mutually beneficial and trusted relationships

Internal

- Continuous improvement: drumbeat of business-focused communications to suit the Route's needs which builds an understanding of industry priorities and those of the Welsh Government

- Ten-year focus: embedding 'how we do things', take 5, delivering a safe, reliable, affordable and growing railway

- Frontline focus: training managers to communicate effectively face to face with their people

- Improved engagement as measured by Your Voice staff survey

External

- Improved lineside neighbour communications reflected by a year on year reduction in public, AM and MP complaints

- External advocacy as measured by ongoing stakeholder audit, reflecting material improvements in our reputation

- Core messages around improvement, customer-focused collaboration, One Voice, Open for Business and partnership landed as captured by external metrics

- Using the Joint Communications Board to work with our partners and speak as once voice

- Protect and enhance Network Rail's reputation and deliver messages consistently to the right audiences at the right time. We will explain and promote how we deliver a safe, reliable, affordable and growing railway

- Champion the work of the Wales and Borders Route to grow advocacy, building relationships and creating a positive climate for investment

The present – where are we now

We are developing a clear vision for the team, centring on being customer-focused, team-players, can-do and speaking-up. Once embedded these will transform us into the high-performing team we aspire to be. Our communications activity will help deliver these behaviours which support our CP6 vision to run a safe, reliable, affordable and growing railway.

- Joint Communications Board in place with Transport for Wales, bringing together key customers and stakeholders to encourage one voice, collaborative behaviour in both external and internal communication

- Focus on lineside neighbour communications and community relations – getting it right every time

- Auditing of internal communications channels

- Use of external audits to measure stakeholder perception

- Defining/refining our core messages

How we will get to the future

- Continued focus on Wales and Borders mission

- Doing the basics better –customer (internal and external) focus, timely notifications, teamwork, collaboration

- Whole-channel mindset: feature stories across all channels (internal, AMs, MPs, media, twitter, Yammer etc)

- Systematic repetition of core messages and use of 'working with'

- Seamless working with all partners (TfW, operators, local authorities, community rail partnerships)

- Employer of choice; positioning Wales and Borders as a great employer

- Yammer participation: 30% currently, increase to 95% by CP6 end

- Flexible approach to internal communications –adapting to suit our audience

- Working with Transport for Wales to strengthen joint communications board

Resources and plan of activities

The Team will be adequately resourced to deliver CP6 in the most effective and efficient way. Our current team is set up to deliver internal and external communications, community relations and project communications. Currently we propose retaining all current roles as we gear up to meet the requirements of CP6. This is subject to the outcome of the Network Rail 100-day programme around deepening devolution and the Williams rail review.

The regular Joint Communications Board meetings will monitor and track our one voice strategy and identify opportunities for partnership working; quarterly Transport Leaders' forum; annual stakeholder conference; stakeholder newsletter; bi-annual leadership events; stakeholder perception audit, benchmarked from 2018, quarterly staff magazine; promoting Yammer; clearly defined, drum-beat of internal communications channels including weekly newsletter, monthly leaders' call, executive team-led staff briefings.

Strategy for commercial focus – third party cash funded contributions

- Current and planned third party funding

Wales Route is the smallest in Network Rail by several measures, but since its formation in 2011 it has been very successful in capturing third party funding for railway enhancements, in particular from the Welsh Government and has invested £185m to date. Examples of this investment & projects in CP5 are:

- Taff Rhonda turn back facility,
- Redoubling of track between Wrexham and Chester and upgrading of level crossings on sections of this track,
- Platform height raising enhancement scheme,
- Talerddig bridges to replace level crossings on the Cambrian line,
- Substantial station enhancement schemes at Rhyl, Ystrad Mynach, Port Talbot, Aberystwyth and Pontypridd,
- Station access improvements, including new footbridges, lifts or ramps, at Chirk, Llandaff, Ystrad Mynach, Machynlleth & Radyr.

This is entirely discretionary spending and is a vote of confidence in the importance of rail to the Welsh economy. There is no secured funding for enhancements projects in CP6, although the route is working with Welsh Government on opportunities within this timeframe. There are several other third parties who have funded, or are in the process of funding, additional network capacity, mostly station improvements. With a large asset base and relatively low infrastructure usage, the Wales Route sees avoided costs and liabilities as important to its third-party strategy, transferring risk and accountability as appropriate.

This strategy proposes that the route maintains its third-party funding by directing effort towards the greatest reward through:

- An effective and efficient delivery for Welsh Government
- Third party funding in the public and private sectors, transferring liabilities where appropriate
- Opportunities arising from local knowledge and development of potential that are not otherwise available.

In the emerging national reorganisation of route structures, the accountability for the External Funding Strategy sits with the Business Development and Route Sponsorship directors, orientated broadly to "non-rail" and "rail", respectively. These changes are intended to improve the already good track record of delivering more investment in Wales, building on the good work of the Property function. Further details are included within the Wales Route External Funding Strategy document for 2016/17.

- Capability & business development

The profile of sponsorship has been strengthened in the route by the appointment of a Director of Sponsorship. It is key that sponsors work across the internal organisation as well as with external stakeholders to guide enhancement and renewal projects throughout their lifecycle, acting as a link between the client, funder, system operator, delivery agents and stakeholders.

Governance for project delivery is in place through GRIP and corporate investment procedures. This will be further enhanced by working with the system

operator and delivery agents to clarify responsibilities and provide more robust governance at the interfaces to allow a more seamless transition through the organisation and look to simplify where appropriate to give easier understanding and visibility to developers and funders. It is important that the route demonstrates that it is safe, effective and efficient in delivery of its schemes. A key challenge is guiding funders through the feasibility phases of a project, where there are many unknowns that can impact on cost, time and output managing expectations in terms of available funding and any other constraints. More robust governance around initial commitment, visibility, management and mitigation of project risks will assist with this.

TfW are setting up infrastructure delivery frameworks and we will work with them to maximise the opportunity this new delivery mechanism brings to Wales and Borders in terms of contestability and innovation, whilst managing the resources available to the industry to prevent cost escalation.

Our analysis of schemes in development suggests that third party investment is feasible through CP6, with the potential for further benefits when integrated with our renewals portfolio.

Business development links into our land strategy, disposal & income generation with the property team as referenced in section 6.5 identifying opportunities for investment, disposal or lease which will support the routes needs.

- Focus for third party involvement

Stakeholder engagement is at the heart of the Wales Route Strategic Plan. The route has a diverse network of stakeholders as discussed within Section 2 and appendix A who have different interests in the railway. Our stakeholders can be broadly classified into three areas:

- Funders and regulators
- Partners
- Passengers and public

We have dedicated teams working with each of our stakeholders with clear stakeholder communication plans as covered in section 2

We are looking to develop better joint ways of working to:
- Develop delivery plans that meet stakeholder needs
- Develop deep working partnerships with WG and TfW
- Support development of a model that enables WG, TfW and TFW to collaborate optimally
- Identify opportunities for third party investment

A Route Supervisory Board will explore third party capital investment opportunities from Welsh Government, TfW (allowing closer ties with port authorities, airports, etc.) and private sector actors including property developers, water companies and telecoms companies, with a current emphasis on Cardiff Central Station, Cogan Sidings, the Great Spring at Sudbrook and prospects for 5G in Wales.

Information Technology

Wales Route will align to the national IT strategy, and will look for IT to enable the aspirations of the route to exploit opportunities to utilise:

- Increased automation, aligned with improved data governance and technology built with its user in mind will enable greater confidence, repeatability and benchmark of the business decisions we make every day
- Modern, intuitive technology as an enabler for being better every day and for attracting and retaining talent
- Greater opportunities to explore the potential for new, unexpected business outcomes through modern IT environments
- Greater convergence of the IT assets of the railway and the Operational Technology (or engineering) assets of the railway. This is to improve data driven decisions based on sensing the state of the railway and for greater automation in asset and train control
- IT is becoming an ever more valuable part of the Critical National Infrastructure with greater controls to predict, prevent and recover from threat. This includes improved whole system view and change of IT across the matrix businesses and broader industry
- Improved ability to collaborate in real-time with industry partners, sharing data through well-defined and managed channels
- Clear whole life accountabilities for IT in a devolved organisation such that empowered decisions can be made for safe and efficient IT lifecycle decisions from strategy, procurement, design, build and operations

The route IT strategy will need to be flexible to accommodate the requirements that are generated out of internal route data steering groups and the national Community of Practice (CoP).

Change (Transformation)

In CP6 we will utilise the devolution of services to support the transformation of the route to operate as an autonomous business, accountable for delivering value for its customers and supporting our people to develop their skills and capability.

Through an embedded structured continuous improvement culture, we will continue to use core tools, such as visualisation, practical problem solving, workplace organisation and process mapping, to identify and eliminate wastes within our business. In doing so, we will create safer working environments, increase productivity and deliver financial efficiencies. Key areas of focus in CP6 will be overhead spend, specifically fleet management and utilities expenditure, and fundamental processes within our business; rostering, procurement, maintenance activities and planning of work.

We are committed to supporting the delivery of centrally driven change programmes forecasted to deliver safety, productivity, people & efficiency benefits; intelligent infrastructure and home safe plan. We will look to build upon our progress towards a digital railway based upon robust business cases.

As we transform the Wales route will continue to share good practice and provide strategic direction to drive further benefit realisation within our business and support learning across Network Rail.

The transformation team in the route will continue to provide a net benefit to the route business through locally & nationally driven transformational programmes, ranging from bottom up structured continuous improvement (SCI) through to digital technologies.

The portfolio of change will continue to be managed through our matrix structure, as outlined in the figure below.

This brings together the four elements of the portfolio, this is driven by strong governance under MSP4NR for programmes and our route project methodology 'change lifecycle Wales' CLW at project level.

The corporate risk management framework is applied throughout and reported through our route driven governance framework to our change portfolio board.

Organisational capability

Our people are our greatest asset; throughout CP6 the Wales Route people plan will continue to create a culture where all our employees feel valued and engaging with in a transparent, ethical and inclusive way.

The Wales Route strategy for organisational development will provide we have an organisation that is fit for CP6 by having the right people in the right place at the right time with the right skills. There will be a robust workforce available to undertake the roles required to provide a safe, reliable, customer-focused, value-for-money railway for the people of Wales and Borders.

Transforming Wales and Borders

Wales & Borders Franchise
- Franchise award of Wales and Cross Borders network
- Divestment of the core valley lines

Continuous Improvement culture
- Workplace Org/5S
- Practical Problem Solving
- Process Mapping
- Visualisation
- Standard Work

Route Portfolio Governance

MSP4NR and CLW frameworks

Locally driven business change
- Accommodation and Property
- Route Corporate Plan

Nationally driven business change
- Intelligent Infrastructure
- Home Safe Plan
- Digital Railway

Through effective talent management the route will attract and retain our workforce to improve performance, enhancing skills through effective succession planning and minimise the short to long term skills gap risks for the business during CP6.

This will be done though early engagement with local education providers and support organisations across the route with a view to build a pipeline of external succession through our Apprentice and Graduate programmes.

We recognise the importance of personal development, ensuring we unlock and maximise the potential of our people. The Wales Route talent strategy will confirm that our people are offered the right learning and development opportunities in accordance with our business needs as well as their career plans, whilst also developing a pipeline of internal succession for our key roles. People Manager Capability is a priority and we will develop our Managers into strong and inspiring leaders with the right skills to support, coach and develop their people. We aspire to have an engaged, motivated workforce passionate about the service they deliver to the people of Wales and Borders.
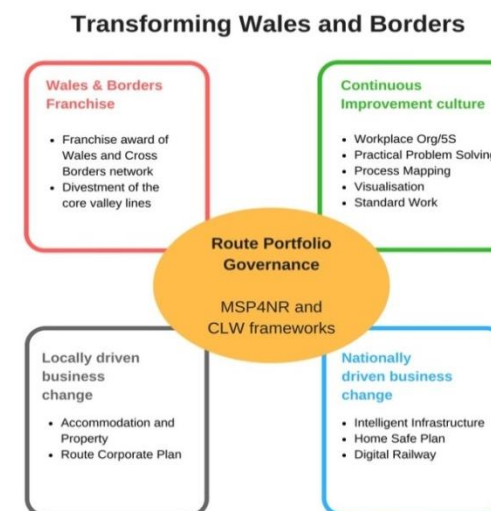
13.1. Social & environmental performance

To help achieve our vision of "a better railway for a better Britain, to meet the need of our customers", the Wales Route is committed to minimising our impact on the environment and improving our social performance within the resource constraints of our funded RSP. Our CP6 plans facilitate a step change in this area, and development of improved ways of working leading to efficiencies in CP7. By 2024 we want to achieve:

1. Environment:

The implementation of an Environmental Management System (EMS) aligned with ISO 14001 to pro-actively manage environmental risk and opportunities.

The aspiration for CP6 is to focus on three priority areas:

- Energy and Carbon
- Resource management
- Ecology

2. Social Performance:

Network Rail's social performance strategy includes ten key outcomes; there is an opportunity to deliver a step change in the management of social performance.

The aspiration for CP6 is to focus on three priority areas:
- Engaging communities
- Reducing anti-social behaviour
- Maximising socio-economic benefits

Community Rail:

In CP6, the Welsh Government will be looking to place greater importance on the role of Community Rail in Wales, particularly its role in creating an integrated transport plan. They will likely be placing obligations on the incoming Franchisee to invest in Community Rail. The Wales Route will need to be ready for an increased sense of responsibility to support Community Rail and therefore should make provision to support such schemes, particularly given the important role they play to local communities and bringing people onto the network in rural areas. The rise of 'rail user groups' will also be pertinent in CP6 as their interests feed the strategic direction of the Community Rail partnerships that serve a specific line of route. Further interaction with these groups at an early stage may be required, to gain early support.

Community Rail lease applications have increased in CP5 and have the potential to increase further into CP6. The groups behind these applications often have strong community and political support which Network Rail will have to manage carefully.

- Lineside Neighbour metric to improve from the CP5 exit.
- Further reduction in the number, and average age of community relation service requests from CP5 exit.

13.2. Diversity & inclusion

We aim to become a more open, collaborative and diverse organisation, providing a great working environment that recognises that people from different, backgrounds, experiences and abilities can bring fresh ideas and innovation to improve our business and practices.

Through active engagement with internal networks and external organisations we will continue to raise the profile of the Wales route as an inclusive employer, widening our pool of attraction and thus becoming an employer of choice.

13.3. Quality

Wales Route is committed to deliver high quality business performance to meet the expectations of our customers and stakeholders. The Wales Route recognises the Network Rail corporate strategy for Quality and is engaged in delivering the objectives of the strategy under the headings of Governance, Assurance and Improvement.

Governance

The Integrated Management Systems (IMS) programme is a companywide programme to deliver a single management system for Network Rail that is based on an agreed process architecture and ownership and accountabilities. The IMS will make it easier for employees to find and understand what is expected of them, that content is current, well managed and compliant with the applicable standards and legislation. The delivery of an IMS is recognised as a significant enabler for improving compliance, driving safety performance and delivering business improvement.

The Wales Route is engaged and supportive of the IMS programme and acknowledges that delivery of the IMS will allow the route to achieve compliance with ISO9001 (Quality), ISO14001 (Environment), OHSAS18001 (Safety) and ISO55001 (Asset Management) standards – achieving standards or performance for a management system. The Wales Route will also continue to progress decision making via data quality improvements through continuation of the Asset Data Governance plans (ADG) and emerging capability provided through EBAK.

Assurance

The Wales Route will use the RM3 model to define what excellence in risk management looks like and allow us to assure ourselves that our risk management approach is operating to an adequate standard, and we have a route map to help continuously improve towards excellence in health and safety management. The Route will deliver RM3 self-assessments as a basis of benchmarking maturity; this will be supported by both RM3 assessments as part of the L2 assurance undertaken in the route. We will use the results of the self-assessment and L2 assurance as the basis for improvement and will be tracked through our joint scorecard in CP6.

Network Rail operates a three-level model for Assurance, where First Line or Supervisory assurance focuses on management of day to day operational risk and control activities (or self-assurance). Second Line focuses on overall effectiveness of individual policy and controls, and Third Line is fully independent assurance of the overall control frameworks.

With increasing levels of devolution, the Wales Route will review and enhance the governance arrangements in the route, so that the Route Leadership are assured that the three levels are operating, and the results of the assurance activity are properly considered and acted upon.

Improvement

The Wales route has a clear vision for improvement that is in line with the Network Rail Better Every Day programme. The introduction of quality into our work extends beyond accreditation and corporate management systems which include:

- Driving continuous improvement using LEAN tools, such as standard work and visualisation
- Optimisation of the planning processes and productivity from each possession
- Planning and delivery of safe work Phase 2
- Getting work 'right first time' through the reduction of repeat faults

Through the effective implementation and usage of these systems and processes, the route is setting itself up for CP6 success.

The Wales Route improvement programme has committed to the company wide objective of training 50% of its staff with business improvement skills during CP5 and the remainder in CP6. This training is underpinned by frameworks that will capture improvement ideas and initiatives, prioritise and select them, and then manage the delivery and benefits in a structured way governed by our SCI board.

Appendix H List of supporting annexes

Annex 1: Change log

Annex 2: Long term scorecard

Annex 3: Efficiency Plan

Annex 4: ABP models