PR18 draft determination consultation – Network Rail Infrastructure Limited responses (all responses are also available on Network Rail's website – see here)

Network Rail's response to ORR's Draft Determination for CP6

31 August 2018

Contents

Summary

ORR's Draft Determination is a critical step in the development of Network Rail's Strategic Business Plan (SBP) for a better railway for a better Britain. It confirms the funding that will be available to enable Network Rail to run a safe, reliable, efficient and growing railway. This document is Network Rail's response to ORR's Draft Determination for CP6.

We welcome ORR's recognition of the progress that we have made during CP5 and its acceptance of the majority of our proposals. ORR has helpfully recognised the improvement in the development of our plans. This reflects the increasing role of the routes, leading to a much clearer set of route plans for CP6, with closer involvement of train operators and other stakeholders. This has enabled routes and the System Operator to own their business plans.

While there are many positive aspects of ORR's Draft Determination, there are a few important areas where we have developed an alternative proposal for adjustments to our SBP. We set out the basis for our alternative proposals in this response.

The key areas are:

- the scale of the further investment in improved asset sustainability
- the reduction in research and development (R&D) expenditure
- the level of additional efficiency savings.

The approach to regulation of train performance is important as there is a significant shortfall against this year's forecast and there continues to be misalignment between our forecasts and franchise targets.

ORR is concerned that renewals expenditure in the SBP is not sufficient to maintain **asset sustainability** in England & Wales. Its view reflects both the assurance review carried out by our Technical Authority and our long-term modelling of renewals expenditure and asset sustainability. We agree that there should be an increase in the investment in asset sustainability.

We have further reviewed our long term-models. As they are based on today's railway, they do not include future improvements in efficiency and asset management from future R&D investment and continuous improvement. In addition, the CP6 renewals expenditure in our SBP does not reflect all asset management activity, including activity that is carried out within enhancement projects. We therefore propose an increase in asset sustainability investment in England & Wales that is lower than ORR's proposal, while achieving the same outcome of sustainable funding.

In Scotland, we agree that an increase in asset sustainability investment is not required. However, since publication of the SBP, we have identified renewals cost increases relating to the emerging scope of the Carstairs project and the need for the replacement of seven bridges at potential risk of failure.

We agree that the SBP did not include a robust plan for **R&D investment**. We have therefore revisited and strengthened our plan and propose that R&D investment of £245 million is funded in CP6. This will deliver savings of around £900 million over the subsequent 15 years. ORR's proposals would result in a significant reduction from CP5 as it has not taken into account the consolidation of our R&D activity into a single programme for CP6. We are also proposing a formal programme review in 2021 to ensure the R&D programme is on target and to redirect funds if it is not.

ORR has proposed an increase in **efficiency savings** by £659 million. This represents a significant stretch on our SBP, increasing the required net savings by over 40 per cent. We have reviewed the evidence for further efficiency that underpins ORR's Draft Determination. Our response identifies a number of concerns with ORR's analysis which we do not consider provides sufficient evidence for the increased savings.

Recognising ORR's challenge, our routes and functions have revisited their plans. They have proposed additional savings of £347 million. While these further savings are owned at a local level, they are not yet underpinned by clear delivery plans and routes are concerned that they increase the risk to delivery of their core plans. While recognising the increased uncertainty, we are increasing the route proposals by a further £144 million to reflect potential unidentified efficiency savings. These could be achieved, for example, through our ongoing standards review. While routes do not have specific plans, they have accepted these further savings, while again highlighting the further increases in delivery risk. Route ownership of their plans is critical to successful devolution.

We agree that we should include **additional safety investment** of £80 million in our plan. We are concerned that ORR's proposed further increase in **property revenue** of £67 million over CP6 is not achievable as we are experiencing a slow-down in property retail income. We have further reviewed our plans and propose increasing our CP6 income forecasts by £25 million.

We welcome ORR's acceptance of most routes' forecasts of Network Rail delay based on the Consistent Route Measure of Performance. We have made some consistency changes to our **train performance** forecasts, including updating the forecast to P50 for South East route as highlighted by ORR.

Since the May 2018 Timetable we have seen a further deterioration in performance including a step change deterioration for some operators. It is not yet possible to be definitive about the full causes of that deterioration. There is therefore uncertainty about the required interventions and the time it will take to recover performance to previously planned levels. We have therefore further updated the forecasts, considering both the current issues and the likely delay to future changes to the timetable. Given the level of uncertainty in these forecasts, we are proposing that Schedule 8 benchmarks should be further reviewed in CP6.

There continues to be significant misalignment as many operators' franchise targets have been set at levels that are not substantiated by credible delivery plans. While many train operators informally acknowledge this, there is a reluctance to reduce targets without formal DfT agreement. We will continue to work jointly with train operators to further develop train performance improvement plans.

We have continued to discuss the requirements of the **Scotland High Level Output Specification (HLOS)** with ORR and Transport Scotland. As some requirements are not suited to being captured on the route scorecard, we have developed a HLOS Tracker to avoid any potential confusion with Scotland's route scorecard. Some requirements need coordinated activity across the industry. It will also help create clarity of responsibilities across the industry in responding to the HLOS.

We agree that we need to inform ORR about **changes in our business plan** and our organisational structure consistent with ORR's proposed managing change process. It will be important that materiality thresholds are appropriate, recognising that the organisation and the business plan will continue to evolve during CP6.

We are acutely aware of the need to deliver our plan in the early years of CP6. We have developed a range of leading indicators so that we can monitor **our readiness for CP6**. We review these indicators every period with routes, which are continuing to develop more detailed information to demonstrate their readiness for CP6.

The alternative proposal shows that we have responded to the challenges set out in ORR's Draft Determination. The routes and national functions have agreed to the proposed changes, which maintains ownership of the plan. We therefore believe that ORR should be able to use our response as the basis for its Final Determination. This would mean that routes would not be required to carry out further replanning following the Final Determination, increasing further our confidence in delivery and ensuring strong ownership of the plan continues at all levels in the organisation.

Network Rail's response to Draft Determination

1. Introduction

ORR's Draft Determination is a critical step in the development of Network Rail's Strategic Business Plan (SBP) for a better railway for a better Britain. It confirms the funding that will be available to build on the transformation of Network Rail that commenced in CP5. This document is Network Rail's response to ORR's Draft Determination for CP6.

We welcome ORR's recognition of the progress that we have made during CP5 and its acceptance of the majority of our proposals. ORR has recognised the improvement in our plans that has resulted from:

- Increasing the role of the routes and the creation of a more distinct System Operator
- Closer involvement of train operators and other stakeholders
- Preparation and justification on the basis of bottom-up analysis of the activity and efficiency plans for each route
- A separate plan for the System Operator to enable better use of the national network.

This has enabled the routes and System Operator to own their business plans, which ORR has recognised is an important step forward.

We welcome that ORR's approach has been guided by principles that are consistent with the transformation of Network Rail. It is consistent with devolution of accountability to routes, with separate funding settlements for each route and route-based monitoring. We strongly support ORR's approach to reinforce the relationship between Network Rail and its customers by embedding scorecards in the regulatory framework and stressing the importance of improved stakeholder engagement.

ORR's recognition of the need for a significant increase in funding for the railway has been critical for the development of the CP6 plan. ORR has supported the investment in maintenance and renewals as well as an increase in expenditure to strengthen the capability of the System Operator. This will enable the System Operator to provide transparent, independent analysis of how to improve the railway for all funders.

We are acutely aware of the need to deliver our plan in the early years of CP6. We have developed a range of leading indicators so that we can monitor our readiness for CP6. We review these indicators every period with routes, which are continuing to develop more detailed information to enhance their readiness for CP6.

While there are many positive aspects of ORR's Draft Determination, there are some areas where we are concerned about its conclusions. The key areas are the scale of the investment in improved asset sustainability, the reduction in research and development (R&D) expenditure and the level of additional efficiency savings. While we agree with ORR's objectives to maintain asset sustainability and drive efficiency, we consider they can be achieved in a better way. The approach to regulation of train performance is also critical as there is a significant shortfall against this year's forecast and there continues to be misalignment between our forecasts and franchise targets.

In this response, we provide an alternative proposal of the adjustments to our SBP that would maintain route ownership of our CP6 plan. We also explain the rationale for these alternative proposals. We believe that ORR should be able to use this as the basis for its Final Determination.

2. Expenditure and efficiency

Summary of alternative proposal for CP6

We agree with many aspects of ORR's Draft Determination. For those areas where we have a different view, we have developed alternative proposals for CP6, which are summarised in the table below, and discussed in further detail in this section.

£m	E&W DD	E&W proposal	Scotland DD	Scotland proposal
Asset investment	870	538	-	70
R&D	(309)	(174)	(32)	(21)
Efficiency	(586)	(428)	(73)	(63)
Safety	80	79	-	1
Property	(64)	(24)	(3)	(1)
BTP	-	-	(40)	(40)
Performance Innovation Fund	9	9	1	1
Total	**-**	**-**	**(147)**	**(53)**

We have included route analysis of the proposal in Appendix 1.

Asset sustainability in England & Wales

ORR is rightly concerned that renewals expenditure in the SBP does not appear to be sufficient to maintain asset sustainability in England & Wales. Its concern is informed by both the assurance review carried out by our Safety, Technical and Engineering (STE) team and our long-term modelling of renewals expenditure and asset sustainability. It has therefore proposed that Network Rail should increase its investment in improving asset sustainability in England & Wales by around £1 billion. This would be funded by reduced R&D expenditure and increased efficiency savings.

We note that the net savings identified by ORR totalled £959 million. As ORR also proposed additional investment in safety improvements and the creation of a Performance Innovation Fund, ORR's Draft Determination would provide additional funding of £870 million to invest in asset sustainability.

We agree that there should be additional investment in asset sustainability. In July, we provided ORR with details of the potential projects that would be delivered if funding of around £1 billion were available for asset sustainability investment, as proposed in the Draft Determination. Since then we have reviewed the rationale for this and have now developed an alternative proposal for the additional investment to total £538 million. This also needs to cover the further Schedule 4 costs.

Long-term modelling

This proposal is informed by a review of our long-term modelling of future renewals expenditure. Our long-term models suggest that the CP6 renewals expenditure in the SBP is around £2 billion less than the long-term average for subsequent control periods. However, they do not produce precise forecasts of future renewals or asset condition.

We have concluded that our long-term models are static as they are based on the application of today's policies and technologies. They do not include efficiency and asset management benefits from future R&D investment and continuous improvement.

We know from past experience that new technology will improve asset management practices. For example, we have achieved a reduction of five per cent in the required level of track work as a result of improvements since the start of CP5. Technology will also improve our asset condition knowledge and enable us to target maintenance and renewals more accurately, particularly for earthworks.

We have also made significant improvements in our asset management capability, which has been independently measured using the Asset Management Excellence Model. This increases confidence in our ability to deliver further benefits from our R&D programme, delivering sustainable benefits in long-run renewals.

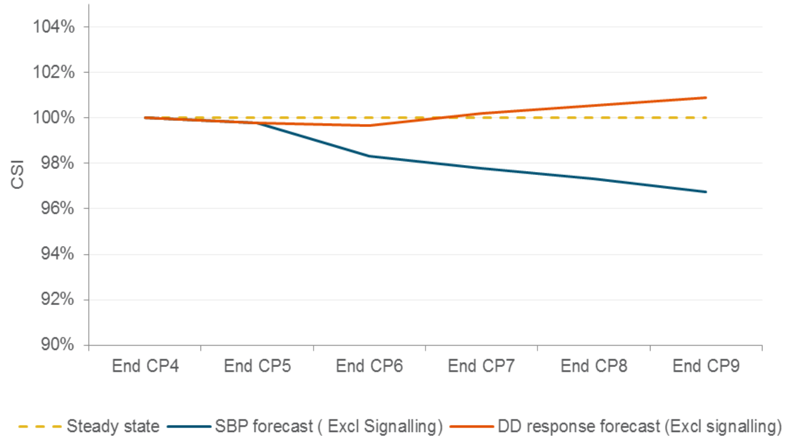
We estimate that investment in R&D during CP6, together with deployment of our Intelligent Infrastructure programme and continuous improvement in our asset management, will deliver benefits of £1.8 billion over the subsequent 15 years.

The models also do not include future efficiency savings. The models do not include the full effect of CP6 savings (£600 million) nor any savings beyond CP6. We have assumed additional savings of £300 million in subsequent control periods. While there is clearly considerable uncertainty forecasting efficiency beyond CP6, we consider our estimate of savings beyond CP7 is conservative.

These adjustments reduce average long run renewals on our core assets (excluding signalling) from £12.4 billion to £10.9 billion per control period.

Our analysis excludes signalling renewals. There is a significant bow wave of renewals in the next few control periods as signalling systems become life expired. Renewing on a like-for-like basis will require additional funding and present huge deliverability challenges. We are therefore developing our plans for the Digital Railway. We expect to be able to reduce significantly the cost of ETCS technology, potentially by 30 per cent. This will enable us to develop an affordable, deliverable programme for replacing signalling systems. The programme includes whole industry costs as there needs to be full integration between rolling stock and infrastructure. We are also exploring the potential for third party funding. The long-term costs of signalling renewals therefore need to be considered separately.

ORR is rightly concerned about the decline in the Composite Sustainability Index during CP6 and beyond. Like our long-term renewals modelling, this presents a conservative view as the models do not include future improvements in asset management, through R&D and continuous improvement, which will result in increases in average asset lives. Including this effect will therefore improve the CSI forecast. The impact of these changes is shown in the following graph.



In addition, the benefits to the Composite Sustainability Measure of increased investment during CP6 are not significant and there would only be a small, one-off reduction in future control period renewals. Whereas investing in R&D provides the opportunity for larger, recurring benefits that will continue reducing long-term renewals costs.

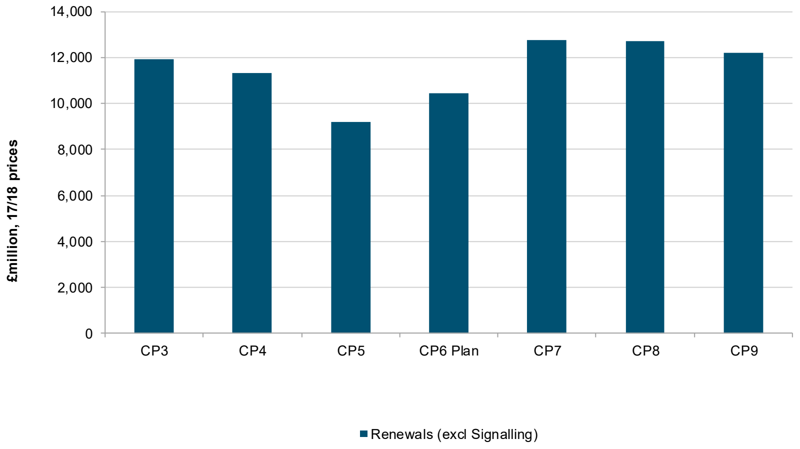
Further investment in asset sustainability

Average long run renewals of £10.9 billion per control period are still somewhat higher than the SBP core renewals of £10.4 billion. We therefore agree that there should be an increase in asset sustainability investment.

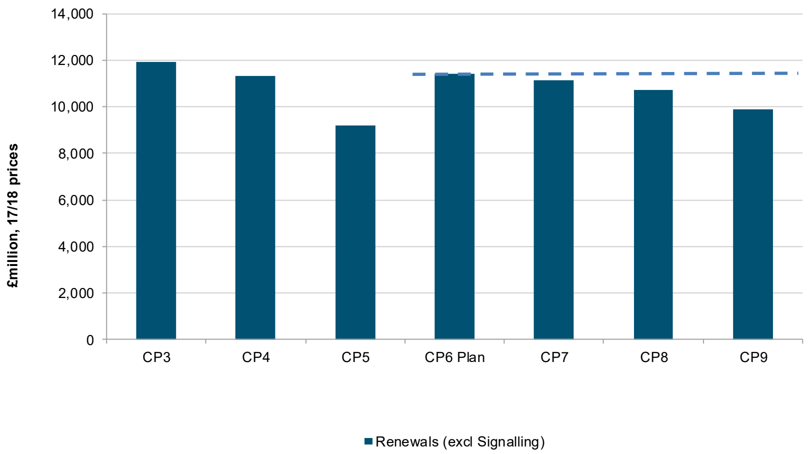
In considering the scale of the increase, it is important to recognise that renewals expenditure does not reflect all asset management activity during CP6. We will also upgrade our assets as part of enhancement programmes that are being separately funded. On the Transpennine upgrade alone we expect to invest around £250 million in our track and earthworks assets. Potential reactive expenditure on earthworks of £188 million will be separately funded through the Group Portfolio Fund or insurance (as it is not possible to predict where it will be needed).

We therefore consider that our proposal for additional asset investment of £538 million achieves sustainable asset management in CP6. This is illustrated by the charts below.

SBP long-term renewals



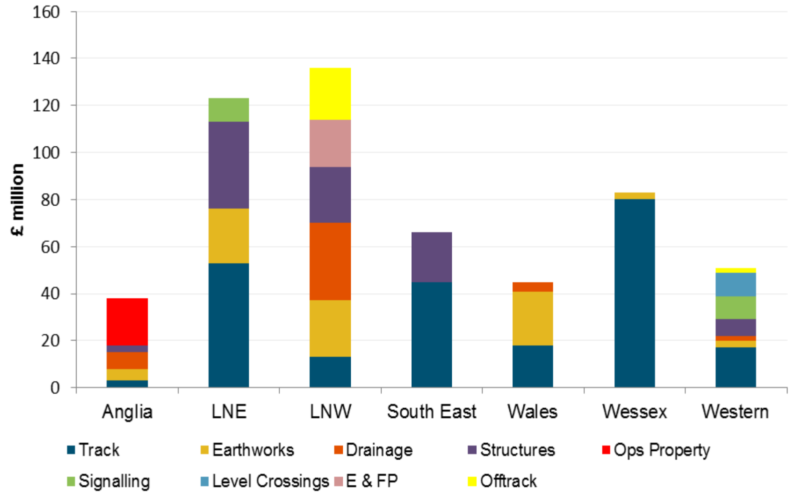
Updated long-term renewals increase



Our proposal takes into account the results of STE's assurance review of the SBP which identified that a further £400 million investment in asset sustainability would be desirable in CP6. Consistent with the recommendation in this review, our proposal includes specific activity totalling £212 million. This principally relates to track and earthworks with the main increases being in the Wessex, LNW and LNE routes.

We propose increasing asset sustainability investment by a further £326 million (resulting in a total increase of £538 million), with allocation to routes being based on a similar approach to our SBP. The approach has been reviewed with the Directors of Route Asset Management for each route with overall assurance by STE. We are currently updating the specific list of investments and the associated Schedule 4 costs (likely to be around £60 million). We will provide more specific detail and the impact on the Composite Sustainability Index to ORR in September. The overall investment is summarised in the table below.

Further asset sustainability expenditure by route and asset type



We note that there is the potential for further investment in asset sustainability. The Group Portfolio Fund includes 'contingent renewals' of £856 million in route plans which can be released for further investment if risks do not materialise. We also note that the other key recommendation in STE’s assurance review was the potential for ‘reactive’ earthworks expenditure of £188 million, which we assume would be funded by insurance or the Group Portfolio Fund, as discussed above.

Asset investment (Scotland)

We agree with ORR that Scotland does not face the same asset sustainability challenges as England & Wales. However, there are two emerging issues that have arisen since the publication of the SBP.

First, the Carstairs rationalisation is a large, complex project which was at a very early stage of development when we submitted the SBP. Further work has identified necessary scope changes that increase the forecast cost by £50 million (to around £150 million) although the project is in the early stages of development so costs remain uncertain. We will continue to work with ORR as the project develops.

Second, the Scotland route plan identified the potential need to replace bridges that have recently been identified to be at risk of failure linked to high alumina cement. Surveys of affected bridges have now been completed. We have identified seven bridges that will need to be replaced in CP6 at a cost of around £20 million.

Given the scale of these cost increases that have emerged since the SBP, it is important that they are funded as part of Scotland’s core plan for CP6. We consider that it is necessary that £70 million of the efficiency and R&D savings should be used to fund this additional expenditure in Scotland. If it is not funded in the Final Determination, it increases the risk that we will need to defer other renewals. This would not be consistent with sustainable asset management.

Research & Development

We agree that our R&D plan was not sufficiently well developed and it was not clear that the programme could be delivered. However, we consider that the proposed funding for R&D is inadequate to drive improvements in CP6 and beyond. The government’s Industrial Strategy White paper (published in November 2017) and the Construction Sector Deal (published in July 2018 by the Department for Business, Energy & Industrial Strategy) both highlight the need to increase R&D to improve productivity for public services and business. The forthcoming Rail Sector Deal should reinforce this.

In CP5 (and previous control periods), much of our R&D activity has been delivered as part of individual investment projects or transformation programmes. In developing our SBP, we decided to bring together our R&D activity as a step towards our overall management of the programme. R&D expenditure throughout the business totalled around £238 million during CP5. The proposal in ORR’s Draft Determination therefore represents a reduction in funding. This level of funding will restrict our ability to drive improvements in CP6 and beyond.

We have carried out a detailed review of the R&D Plan and provide an update as part of this response. We have focussed on R&D activity that drives improvement of infrastructure management. We have therefore removed the R&D activity that aimed to deliver wider industry benefits.

We are now proposing investment in R&D of £245 million, with further third-party funding of £112 million, resulting in an overall programme of £357 million.

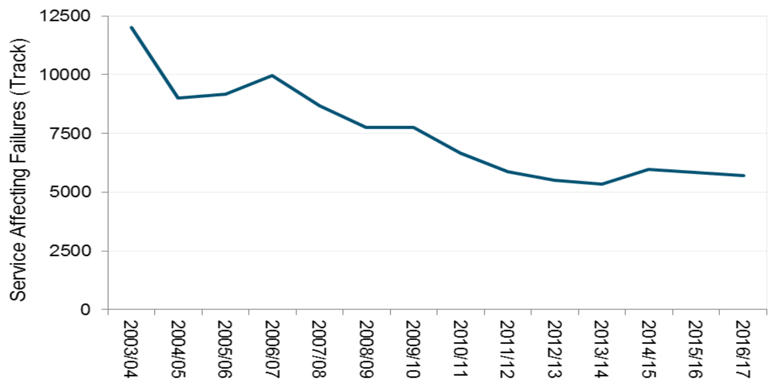
The R&D plan includes critical improvement programmes, such as Intelligent Infrastructure and improvements in our asset management strategies. We have developed summaries for each project, which outline the project purpose together with a forecast of the cost, benefits and matched funding.

We estimate that the investment in R&D will deliver asset management benefits of £900 million over the next 15 years, reflecting improvements in the approach to managing track, structures and earthworks which will enable us to extend asset lives and reduce renewals expenditure. The benefit to cost ratio of this investment is expected to be around 3 to 1.

During CP5, we have raised third party funding of £68 million. We recognise that our proposals for matched funding in the SBP were not well founded. We have reduced the proposal in our updated plan and we are now forecasting third party funding of £112 million. This is based on our experience of CP5, together with ongoing discussions with a range of organisations including rail and other infrastructure managers as well as suppliers.

We have a record of delivering successful investment in R&D. Over the last 15 years, there are a wide range programmes that have enabled us to improve our asset management. We have made particular improvements in the management of track, for example starting with the introduction of rail based train grinding in 2003 and more recently Plain Line Pattern Recognition in 2013/14.

These investments have enabled us to significantly improve asset reliability and safety with a reduction in service affecting failures by around 40 per cent as shown in the graph below. The number of broken rails has also reduced by 70 per cent since the start of CP3. It has also enabled us to revise our asset policies, which has reduced the required investment in track renewals by £1.5 billion over CP4 and CP5.



Projects are currently at different stages of maturity, which is assessed using the Rail Industry Readiness Levels. The majority of projects will be implemented during CP6 or in early CP7. As part of a balanced programme, there are some projects that are more exploratory (or 'blue sky') which we do not expect to be ready for deployment until CP8. We are assuming that there will be an ongoing investment in R&D to enable us to continue developing improvements in future control periods.

We have also assessed the overall deliverability of the programme. Over the last six months, we have significantly increased our delivery confidence as a result of more detailed planning for each project as well as the reduction in the scale of the overall programme.

We are proposing a new industry R&D advisory board which will include the DfT Scientific Officer and other industry R&D experts. Transport Scotland will also be invited to join this board. It is important that the R&D programme benefits the whole network, recognising that it is funded by both the UK and Scottish governments. The R&D programme will deliver benefit for the Scotland route with trials in Scotland relating to earthworks and drainage. We will be working with Heriot-Watt and Strathclyde universities, and are in discussion with The Oil and Gas Innovation Technology Centre in Aberdeen.

We recognise that there is uncertainty in delivering value from an R&D programme. We therefore propose to carry out a formal review of our progress in delivering the programme in 2021. If the programme is not making adequate progress, we will revise our plans for the rest of CP6 and redeploy the funding into asset sustainability investment. We will engage with ORR and the industry during this review.

Equally, if we are delivering the programme successfully and there are further projects with a strong business case, we will consider investing further in R&D using the Group Portfolio Fund if financial risks have not materialised. We welcome ORR's support in the Draft Determination that this is an appropriate use of the Group Portfolio Fund.

Efficiency and headwinds

ORR has assumed that Network Rail can make further efficiency savings of £659 million during CP6. This represents a significant stretch on our SBP, which included net efficiency savings (i.e. efficiency less headwinds) of £1,578 million, increasing the required net savings by over 40 per cent. By the end of CP6, the net efficiency in the SBP (7.5 per cent) would increase by more than two per cent.

In the following sections, we set out our proposal for further savings and our concerns about ORR's assessment of the proposed further savings.

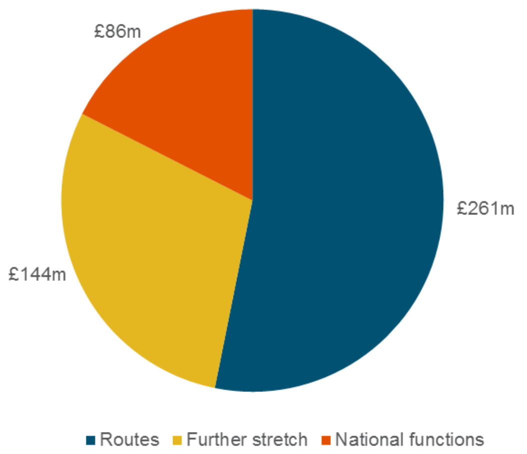
Responding to ORR's challenge

We recognise that forecasting efficiency savings is uncertain and requires judgement. In the light of ORR's challenge, our routes and functions have revisited their plans.

Routes and national functions have reduced the level of headwinds in the plan by £100 million, informed by further work carried out by Nichols, the independent reporter. They have also proposed additional savings of £246 million. This includes savings committed by national functions of £86 million. While these further savings are broadly owned at a local level, they are not yet underpinned by delivery plans and routes are concerned that they increase the risk to delivery of their plans. Further savings reflect each route and function's individual approach. We have not required a fully consistent approach so that we maintain local ownership which will increase the likelihood of successful delivery and benefit from innovation. The source of these savings is largely based on delivering further savings from the initiatives in the SBP.

While recognising the increased uncertainty, our proposal includes further route savings of £144 million to reflect potential unidentified further efficiency savings. The level of this further stretch takes into account the relative additional efficiency proposed by each route. These could be achieved, for example, through our ongoing standards review. While routes do not have specific plans, they have accepted these further savings, while again highlighting the further increases in delivery risk.

The total further savings of £491 million will largely be achieved by reductions in renewals costs.



The inclusion of these additional savings in our plan will increase the overall net efficiency savings during CP6 to £2,069 million. This is summarised in the table below.

£m	SBP	DD response	Increase
Procurement delivered route efficiency	392	408	16
STE delivered route efficiency	80	204	125
Route delivered route efficiency	201	215	14
Optimisation of access	190	210	20
Improved workbank stability	189	189	0
LEAN and other local improvements	169	253	84
Efficiencies linked to increased asset sustainability investment	-	45	45
Non route renewals efficiency	357	443	86
Opex efficiency	788	788	0
Total gross efficiency	**2,366**	**2,756**	**390**
Headwinds	(788)	(687)	101
Total net efficiency	**1,578**	**2,069**	**491**

While the reduction in headwinds affects the whole control period, the other efficiency savings are largely included in the later years of the control period to avoid undermining the stability of the plan in the early years of CP6.

This additional commitment seeks to maintain ownership of the plan at a route level, while delivering most of the additional savings that ORR proposed.

Reviewing ORR's efficiency evidence

We have also reviewed the evidence for further efficiency that underpins ORR's Draft Determination. We have a number of concerns with ORR's analysis which we do not consider provides robust evidence for the increased savings.

ORR's proposed adjustment is based on quantitative analysis by the independent reporter, Nichols, of the headwinds that were included in the SBP, which totalled £787 million. ORR considers that most of the SBP headwinds were potentially double counted in the base costs, inadequately justified or could be mitigated by additional efficiency. These findings were supported by further qualitative analysis.

We are concerned that ORR's efficiency assumptions are an 'overlay', which undermines ownership of the CP6 Plan at a local, granular level. This has been one of the key successes of the SBP, which we do not wish to see compromised.

We summarise our concerns below.

Headwinds

We have worked with Nichols to understand better its review of the headwinds in the SBP. As a result, we continue to consider that most of the headwinds are legitimate cost pressures.

The inclusion of headwinds is a major step forward in our planning. We did not make a specific allowance for these cost pressures in our SBPs for previous control periods. We acknowledge, however, the potential for improving the quantification of headwinds in the future.

We accept that there should be a reduction in headwinds by £100 million on the basis that they have either been over-estimated or are difficult to justify, and are better represented as a risk to our plan. However, we cannot see any evidence to justify the removal of a further £559 million. In particular, no double counts were identified in the base cost by Nichols. We are also concerned that Nichols has noted headwinds are difficult to quantify resulting in uncertainty in their valuation (although it has not identified any adjustments that should be made). We note that both ORR and Nichols have recognised that the inclusion of headwinds is appropriate. It is therefore difficult to understand how the quantification of proposed efficiency savings by ORR is solely based on the analysis of headwinds.

Qualitative analysis

We have reviewed the qualitative analysis in the Draft Determination. We consider that there are a number of factors that ORR has not taken into account in concluding that our efficiency assumptions are conservative.

ORR states that "a period of unusually poor performance on efficiency" will have affected perception of what can be achieved in CP6. We are clearly very aware of the risk of committing to a level of efficiency that is not realistic. However, we do not consider that this means that our plan will include "inevitable conservatism". While routes and functions have developed more detailed plans to underpin our efficiency assumptions, many improvements are still at an early stage of development. There is therefore a significant risk that our plans are optimistic and that delivery challenges have not been fully understood.

It is not inevitable that the significant cost pressures during CP5 will reverse during CP6. In particular, we expect the pressure on the availability of engineering access to continue which is a key driver of costs, maintenance and renewals costs will be higher due to the increase in the electrified network (for example due to additional isolation requirements) and it is unlikely that the increase in renewals costs (which largely reflects the Tender Price Index which increased by significantly more than RPI in CP5) will reverse due to the scale of infrastructure work in Great Britain over the next decade.

There are likely to be additional cost pressures during CP6. In particular, additional costs are likely to arise in CP6 as the industry delivers improvements that will be needed following the Glaister review of the causes of the major problems following the introduction of the May 2018 timetable. These could include additional resources to strengthen the capability of the System Operator.

ORR considers that there will be further benefits from a stable plan. This does not appear to acknowledge that we have already included savings of £197 million as a result of more stable workbanks and £253 million reflecting early contractor involvement in renewals planning, which can only be achieved with a stable plan.

It further considers that the SBP has not reflected the full opportunities of route devolution. As our plans have been developed at a local level, this has given routes the confidence to develop stretching efficiency targets. Delivering the efficiency levels in the SBP will already require a much more disciplined approach. Our plan already reflects the effects of devolution and is underpinned by route ownership.

The base costs in the SBP have been reviewed by ORR's consultants, Gleeds. It did not identify any significant errors that required adjustment. We recognise that the approach to costing our plan is complex, particularly the adjustments to 'normalise' current costs (i.e. remove one-off costs / outliers that are not expected to be incurred in CP6). As Gleeds has concluded that the approach to costing is reasonable, there does not appear to be any evidence that the base costs include "inappropriate inefficiencies". We consider that our approach to normalisation means that it is less likely that there will be a double count with the inclusion of headwinds.

ORR is particularly concerned that the SBP includes almost no tailwinds. This is a reasonable challenge. However, we believe potential tailwinds are already included in the plan. Almost all cost reductions require positive management actions and therefore the impact of tailwinds will largely have been included within the overall efficiency savings. Recognising that ORR is concerned about how cost changes are classified, we want to work closely on the presentation of cost changes during CP6.

ORR has provided some examples of potential tailwinds that it considers have not been reflected in the SBP. The most significant is input price inflation for IT costs which is expected to be lower than RPI. As part of our SBP, we provided ORR with overall input price analysis. This demonstrated that our overall costs generally increase by around 0.4 per cent more than RPI. This is broadly consistent with the total input price headwinds that we have included in the SBP. We therefore do not agree that the SBP has omitted input price tailwinds. However, we recognise that, while the aggregate input price inflation is broadly reasonable, there are likely to be inaccuracies in how input price inflation has been reflected in individual route and function plans.

Other proposed adjustments

We included options for incremental safety investment in route plans, largely relating to additional investment in level crossings and improvements to the safety of access walkways. We agree with ORR's proposal to include these in our base plan, resulting in an £80 million increase in safety investment. This included increased spend of £25 million relating to improved level crossing technology at the highest priority user worked crossings on the network. We have allocated this to routes based on level crossing risks, including £1 million for Scotland route.

ORR identified a potential increase of £67 million for additional property revenue in CP6. We are particularly concerned by the significant uplift in retail income. We are currently experiencing a reduction in station footfall. As a result of this, and other factors, we are currently falling short of this year's retail shops budget by three per cent. This presents a significant risk to the further growth in the CP6 plan. Achieving ORR's further stretch appears unrealistic as it would require an upturn in market conditions at a time when there is considerable economic uncertainty due to Brexit, as well as a very challenging environment for retail and restaurant businesses. However, we have reviewed our property plans and have identified a further £25 million of additional property revenue for inclusion in our CP6 plan.

We understand that DfT has confirmed that BTP costs in Scotland will be funded separately and therefore agree that they will not be funded by the Scotland SOFA.

ORR has proposed the creation of a Performance Innovation Fund of £10 million to fund the development of innovative proposals to improve passenger and freight performance. We are unclear what sort of activity this is intended to fund as ORR has provided us with very little further information since publication of the Draft Determination. We are keen to discuss this further so we can better understand the value of this proposal. We note that ORR considers this fund will need specific governance. We need to make sure that governance is appropriate to the scale of the fund.

Since publishing the SBP, we identified to ORR that we omitted the Crossrail Access Charge Supplement which reimburses Network Rail for part of the Crossrail construction costs. It is expected to be between £260 million and £280 million in CP6, depending on the cost of debt determined by ORR in the periodic review.

We have proposed that part of this income could be used for replacement of the Ryde Pier (currently estimated to be £40 million). This was not included in the SBP as the Isle of Wight infrastructure has previously been funded through the franchising process, separate from the periodic review.

This income could also be used for other emerging costs, such as network change relating to the rail vehicle effluent discharge policy which is around £13 million. We also note that there is an opportunity for some of this income to increase further the investment in improving asset sustainability.

We have also recently identified that Schedule 4 cost are likely to be around £40 million higher than the SBP in 2019/20. This is due to the ongoing impact of the current timetable issues. It has not been reflected in our proposal in this response. We would like to discuss this with ORR, including the implications for the Schedule 4 Access Charge Supplement.

Digital Railway

We welcome ORR's support for the inclusion of Digital Railway's central programme costs and the enabling network-wide investments in the SBP. In terms of overall Digital Railway funding DfT expects to take incremental business case decisions on route deployments from the National Productivity Investment Fund (NPIF) and through the separate enhancements pipeline process.

We are reviewing the transition of conventional signalling renewals to ETCS schemes and assessing opportunities for attracting private finance with Government. We are working with DfT and industry to prioritise the most valuable schemes on the basis of safety, life cycle cost, capacity and performance for delivery within the available funding.

The supply chain is supporting the Digital Railway programme's new approach to efficient delivery. This is reflected in the proposed Rail Sector Deal. For example, the East Coast Main Line South scheme is demonstrating contestability of delivery while also moving to outcome-based procurement which is linked to operational improvements for passenger and freight users.

Following the joint launch of the Digital Railway Strategy by the Secretary of State for Transport and Mark Carne in May 2018, Network Rail has committed to developing a long-term plan for digital train control and signalling by February 2021. This will link the initial digital deployments in CP6 with the longer term, and will align rolling stock and network infrastructure investments to deliver the optimum benefits. This will enable our supply chain partners to plan their resources to deliver greater efficiencies. We will be transparent about any resulting changes to our plan, consistent with ORR's process for managing change in CP6.

Expenditure profile and deliverability

In the Draft Determination, ORR expressed some concern about the annual profile of expenditure. We have asked each route and function to carry out a high-level review of expenditure in advance of the next detailed plan update. As a result, we have updated our annual spend profile for renewals, moving £177 million from the first three years of CP6 into the final two years of the control period.

We have also carried out a further deliverability review of our capital expenditure programme, which included the impact of additional asset sustainability investment. Factors such as engineering access, supply chain capability, deliverer, delivery strategies and key resources were considered in the review.

The additional asset sustainability investment for most asset groups is considered deliverable with a good confidence rating. Additional track volumes are considered deliverable although a few issues were identified. Recommendations have been made to ensure smooth delivery alongside existing delivery levels and routes are planning most work for the last three years of CP6. This should ensure that development and access and resource planning can be achieved in a timely manner without compromising the safety and efficiency of the network.

Cost allocation

ORR continues to review the allocation of central costs between England & Wales and Scotland. As ORR's consultant, CEPA, has not identified any specific issues with the allocation methodology, we do not think any adjustments should be made. We also note that the allocation methodology is consistent with the approach adopted when the SOFA funding was being determined.

3. Outputs

We welcome ORR's confirmation that our route and SO scorecards will form a key part of its approach to regulation in CP6. Importantly, this creates a regulatory framework that 'wraps around' the way we run our business and meets the requirements of our customers and stakeholders. We agree with many of ORR's conclusions relating to its assessment of route and SO scorecards although there are some aspects where we have a different view or require clarification. Our response to the key points in ORR's assessment of scorecards is summarised below.

Reflecting the HLOSs

We are pleased that ORR agrees our scorecards support the delivery of the governments' High Level Output Specification (HLOS) requirements. Some requirements set out in the Scotland HLOS are not necessarily suited to being captured on the route or customer scorecards. While we agree with ORR on the concept of a 'HLOS scorecard' for Scotland, we propose that it is referred to as the 'HLOS Tracker'. This will be important in removing any potential confusion with Scotland's route scorecard.

The Scotland route has worked with the SO and FNPO to develop a draft HLOS tracker, which is included as part of our Draft Determination response. A number of its components require coordinated activity across the industry (for example including passenger and freight operators and funders). We will continue to engage with ORR and Transport Scotland to provide greater clarity of the roles and responsibilities across the industry in delivering these plans.

It will be important to clarify with ORR and Transport Scotland the process for taking decisions on which major renewals projects proceed in CP6. Our view is that Network Rail should retain ultimate accountability for decisions but that we should work together to develop improved means of consultation on major renewals decisions.

Train performance

The train performance forecasts included in the SBP were developed by the routes, in collaboration with operators, who have provided input and challenge. Routes considered these 'ground-up' forecasts were stretching but realistic.

ORR proposed specific changes to the Consistent Route Measure of Performance (CRMP) for three routes. It also expressed concern about the misalignment between Network Rail and train operators on industry performance forecasts. Beyond that, it considers Network Rail's proposal for the CRMP threshold should be adjusted. For Scotland, ORR proposes that the route should be measured against the HLOS target of 92.5 per cent PPM. The following sections set out our response to these issues.

Forecasting train performance

Forecasting and modelling future train performance continues to be a major challenge for the industry due to the interaction of many variables. It is particularly difficult when there is congestion on the network or where there are a number of complex, interacting changes (e.g. the interaction between the timetable resilience and the resources available to deliver it). This is partly because the available data is based on attributing delay to the primary cause of incidents rather than a detailed analysis of the drivers of total train delay. Around 70 per cent of delay is reactionary.

There are many factors that impact train performance. Key drivers of improvement include more reliable infrastructure and fleet, benefits from enhancements and more effective incident management. However, there are also downward pressures, including increasing passenger numbers, more complex train services, industrial action and the current timetable issues. Over the last few years there has been a significant improvement in infrastructure and fleet reliability, while train delay has deteriorated as the delay caused by each incident has increased significantly.

Developing performance plans

During CP6, our plans reverse the predominantly downward trend in train performance of the last seven years. Delivery of performance requires close collaboration with train operators and is an outcome of whole industry delivery. Our plan has been built 'ground-up', informed by engagement with operators. We need to continue working collaboratively to develop joint improvement plans, with route scorecards being used to hold routes to account. We believe that this will enable the industry to deliver a system wide approach to addressing performance.

However, there is currently significant misalignment between franchise targets and the levels of train performance. We expect this misalignment to reduce, gradually, as new franchises are awarded, with franchise targets being signed off by the System Operator. We note that in its response to the Draft Determination, DfT states that it is prepared to discuss targets with current franchised operators if it is a material issue.

Initial response to Draft Determination

It is encouraging that ORR and the independent reporter, Arup, largely concluded that our CRMP forecasts in the SBP are reasonable. ORR proposed that Anglia, Wessex and South East routes should revise their CRMP forecasts. We provided an initial response to ORR in July with the following key changes:

- Anglia amended its modelling and responded to evidence from two operators to support higher performance
- South East updated its forecast to P50, validating the consistency of its approach with other routes
- Wessex did not revise its forecasts as it provided further details to justify the "unknown decline" highlighted by ORR.

We also made a small number of other changes including an update of Western route's forecast. This reflected further engagement with Great Western Railway on the phasing of its CP6 PPM trajectory.

2018/19 train performance

Our SBP submission assumed performance improvement during 2018/19, with a PPM forecast of 89.0 per cent by the end of CP5. Actual train performance in 2018/19 is significantly worse than target. PPM has fallen to 86.0 per cent. The principal reasons for the deterioration in train performance are the robustness of the May 2018 timetable and the resources available to deliver it. In addition, the extreme heat in the summer caused further deterioration in performance.

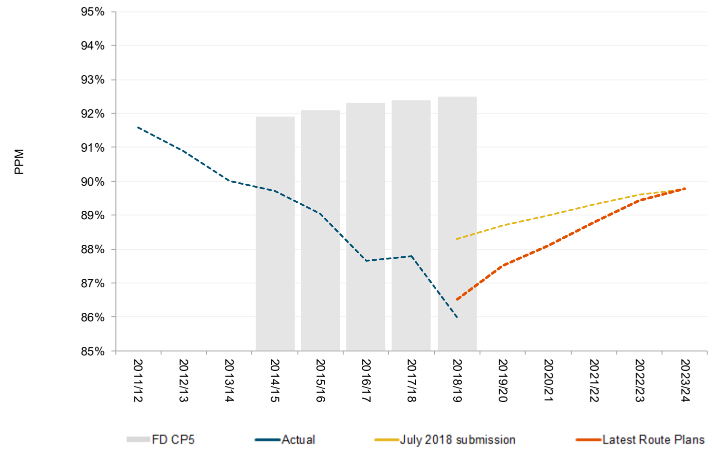
The impact of the May 2018 timetable and the lack of resources are major system issues and we will not recover the shortfall in train performance by the start of CP6. Since our interim update to ORR in July, the impact of the current issues is now better understood. We have therefore further updated some of our train performance forecasts in this response.

In updating the forecasts, we are also conscious that there has been a sustained downwards train performance trajectory for the last seven years. The improvement required to return to the planned trajectory in our July response by the first year of CP6 (2019/20) would be unprecedented.

Updated CP6 performance forecasts

In developing updated forecasts, our overall aim is to return to planned performance levels as quickly as possible. We have considered how quickly the industry is likely to recover from the current issues. In broad terms, we expect there to be sufficient resources in place by the end of the current year and the current timetable issues to be largely resolved through the next two timetable updates. However, there is a significant impact on the development of new timetables to accommodate new services. As a result, there will continue to be challenges to resolve until the middle of CP6.

We have focused the changes to our forecasts on the train operators that are most significantly behind target this year. The largest change is for Northern. We have also revised the forecasts for TransPennine Express, ScotRail, South Western Railway, LNER and Great Western Railway. The revised forecasts are based on the likely timing of future improvements. For example, for Northern we are assuming a significant improvement in 2019/20 with the improvements to the timetable and completion of the Bolton corridor electrification project. There will be further improvements over the next two years with the introduction of new fleet together with further timetable and infrastructure improvements. The overall impact of the updated forecasts is summarised below.



Train performance – Scotland

In respect of Scotland's PPM target, ORR has stated that the route should be measured against the 92.5 per cent PPM target set out in the Scotland HLOS for all five years of CP6.

We fully support the intent of working towards 92.5 per cent. However, we do not think this will be achieved in the first two years of CP6. We do not think that there will be sufficient systematic performance improvement outputs from the Donovan Review and other improvement plans. This has been reinforced by train performance trends since the SBP was published.

We are forecasting train performance of 90.5 per cent PPM in 2019/20 and 91.5 per cent in 2020/21. It is important that the likely (not aspirational) PPM outcome is reflected in Scotland's CRMP trajectory and Schedule 8 benchmarks in ORR's Final Determination.

Freight performance

We welcome ORR's view that the national and route FDM trajectories set out in our SBP submission are reasonable and its acceptance of the route FDM regulatory minimum floors. When we update our CP6 delivery plan for publication in March 2019, we will review freight trajectories with customers in the context of updated performance trajectories.

Proposed approach to train performance

We are proposing that ORR should agree that, since publication of the SBP, there has been a material change and that the CP6 train performance forecasts should be updated. In this response, we are providing updated train performance trajectories for the train operators where there is a significant shortfall in 2018/19. The impact of the revised forecasts of industry forecasts on CRMP are summarised below. The table shows the changes to CRMP in 2023/24.

We propose that ORR uses our revised CRMP forecasts as the basis for setting Schedule 8 benchmarks and CRMP thresholds. This will maintain route ownership based on deliverable trajectories developed in conjunction with operators. It is important that Schedule 8 benchmarks are set at a level that is realistically achievable. Unrealistic benchmarks will result in significant additional costs for Network Rail and restrict the funds available to invest in improving train performance and asset sustainability.

Minutes / 100 train km	SBP 2019/20	DD response 2019/20	SBP 2023/24	DD response 2023/24
Anglia	1.46	1.44	1.46	1.43
LNE	1.34	1.43	1.27	1.22
LNW	1.62	1.71	1.59	1.52
Scotland	0.96	1.06	0.95	0.89
South East	3.03	3.03	2.79	2.81
Wales	1.54	1.61	1.52	1.51
Wessex	2.35	2.78	2.22	2.53
Western	1.80	2.12	1.69	1.61

We recognise that there is considerable uncertainty in these forecasts. We have already proposed that fundamental changes in circumstance should result in a contractual reopener of the Schedule 8 benchmarks in CP6 (e.g. following the introduction of Thameslink and Crossrail services). We also recognise that the May 2018 timetable has had some positive effects, for example on Southern. We also propose that there should be a reopener if these forecasts are materially / systematically understated. We would like to discuss this further with ORR.

ORR should support the continuation of collaborative working between Network Rail and its customers to agree annual performance targets throughout CP6, underpinned by performance strategies, with scorecards being used to hold routes to account. ORR would then monitor the effectiveness of engagement and the extent of agreement throughout CP6. This would inform whether any further intervention by ORR is required. It would also be consistent with ORR's overall approach to regulation in CP6. We also believe that the use scorecards should be included in future franchises to further build alignment.

While we understand why changes have not been made to Schedule 8 for CP6, we believe that a review is required in CP6 to consider whether it is providing the right incentives to Network Rail and train operators.

CRMP thresholds

The CRMP trajectories in ORR's Final Determination will inform the CRMP regulatory minimum floor and Network Rail's CP6 Schedule 8 benchmarks. We are continuing to discuss the minimum floor with ORR with discussions focussed on two key areas – the level of the margin and the methodology for calculating the threshold. We are concerned that the proposal to set the CRMP minimum floor at a consistent margin of 20 per cent below the CRMP trajectory would be susceptible to breach because of natural variation. We also believe that a methodology based on historic average performance over CP4 and CP5 is not the best way to calculate the threshold given the wide variations in performance over that period. We will continue to discuss this with ORR.

While CRMP trajectories will be updated annually in CP6 through the route scorecards, the regulatory minimum floor will remain fixed, unless there is a fundamental change in circumstances. We consider that, if Schedule 8 benchmarks are amended, the CRM-P threshold should also be reviewed.

Asset management

We welcome ORR's acceptance of our proposed regulatory minimum floor for network sustainability in CP6.

ORR asked Anglia, LNW, South East and Wessex to review their service affecting failure (SAF) and Composite Reliability Index trajectories in light of the STE assurance review. They have reviewed their SBP trajectories, considering various route-specific factors in deciding whether changes are needed. For example, the impact of additional traffic and new rolling stock, and potential benefits from improvements to prevent asset failure. They have concluded their trajectories remain realistic, while also challenging.

We agree that asset sustainability should be monitored across a broad range of performance indicators (including inputs and outcomes). We will produce an annual, route-based engineers' report for each asset type. Route asset engineers will update ORR on progress of work plan delivery.

We will update our asset sustainability forecasts as part of our business planning process. Consistent with the process for managing change in CP6, we will explain the basis for changes. This will support alignment between regulatory reporting and information used within Network Rail.

We are working with ORR on the development of an alternative, improved measure of network sustainability and will provide ORR with a plan for this by the end of September 2018.

Other scorecard measures

We agree with the majority of ORR's assessment of other scorecard measures for CP6. We have a few concerns about ORR's proposals.

We will report the passenger satisfaction results from the twice-yearly National Rail Passenger Survey (NRPS) in the route comparison scorecard. Comparisons should be made between results of the same season (e.g. comparing autumn to the previous autumn). This will provide a more meaningful comparison, highlighting areas of genuine difference rather than seasonal variations.

We do not consider that a measure for third party investment is currently suitable for inclusion on route scorecards. It is a new measure that is not yet fully developed. We are also concerned that increasing the number of measures will reduce the effectiveness of scorecards. Instead we propose to include a section on third party investment in each route within our quarterly scorecard report. This will provide transparency and enable routes to be held to account for progress in raising third party investment.

We will include two measures for passenger and freight traffic growth in our route comparison scorecard. We do not agree that the traffic baselines should be fixed for CP6. There is considerable uncertainty about traffic levels, particularly given the current timetable issues. We are concerned that fixed traffic baselines would undermine the value of these measures and fail to incentivise routes. Our business plans are based on annually updated traffic forecasts. We propose therefore to report quarterly actual traffic against an updated annual forecast.

We welcome ORR's recognition that the Possession Disruption Index measures are no longer considered fit for purpose. To monitor use of the network for engineering access in CP6, we proposed to use an annual customer survey which will build on the initial survey that ORR carried out in 2017. We will also monitor the core measures which focus on the impact of engineering access on end users and customers. We do not agree with ORR's proposal to include extended journey time in the CP6 monitoring framework. It does not drive Network Rail decisions and we do not believe it is meaningful to our customers or end users.

We are working closely with ORR and the Independent Reporter to develop appropriate metrics for network capability in CP6. It is important that all parties are clear how any assessment of capability will be made.

4. Financial framework and affordability

The CP6 framework is important for our financial viability and stability. This section responds to the key issues in ORR's Draft Determination.

Group Portfolio Fund

We welcome ORR's acceptance of the proposed Group Portfolio Fund (GPF) of £2.6 billion. We accept ORR's decision to move £856 million of the centrally-held GPF in England & Wales to routes, although we note that it reduces the competitive tension between routes. We agree that each route should identify 'contingent renewals' that will be delivered if risks do not materialise. This will be included in our updated CP6 plan following ORR's Final Determination.

The reduction in centrally-held GPF funding means that routes will need to manage all, but exceptional, risks within their own funding settlements. Decisions to release the GPF for incremental investment will be made as part of our continuous business planning process. We have reviewed the governance arrangements for the use of GPF in CP6. The corporate business planning process is still at the core of our proposals, which provides regular points throughout the year for routes and national functions to identify changes in the degree of financial risk they face. We have strengthened the key role of routes in deciding how money from the GPF will be used during CP6. For example, Route Managing Directors (RMDs) will now report directly to the Chief Executive and will play a key role in reviewing the release, and use, of the GPF.

Prior to the Final Determination, we will work with ORR and Transport Scotland to clarify how the £284 million GPF is controlled in Scotland. We expect that the governance arrangements to be largely consistent with those in England & Wales.

Budgetary flexibility

ORR's Draft Determination sets out the financial controls framework that will apply to Network Rail at a GB-level in CP6. We continue to clarify arrangements in Scotland with Transport Scotland.

We recognise that the framework provides greater flexibility than most public sector arm's length bodies. However, the controls will constrain our ability to adjust budgets between years of the control period.

We recognise we can go some way to mitigate the risk of either significant underspending, or overspending, against our budgets by continuing to improve the accuracy and effectiveness of our business planning, and our cash flow forecasting. We are also improving how we assess the degree of financial uncertainty in our plans.

We will include GPF funding in CP6 plans as 'resource' expenditure for government accounting purposes. This approach would provide flexibility to use this funding for risks that materialise in resource expenditure, and, otherwise to transfer the remaining GPF to capital expenditure, which can be used or carried forward to future years (subject to government budget limits on the level of change).

Network grant

We need certainty over the grant payments that we will receive each year to provide a stable funding environment to allow us to deliver our CP6 plan. We are working with DfT and Transport Scotland to agree how we can formalise the annual grant payments in CP6 so that we have the same certainty of funding as CP5.

We propose that ORR should use the updated high-level expenditure reprofiling provided as part of this response to determine CP6 annual grant payments. This will represent the most up-to-date information. It will also be based on the same information that government will be using to set expenditure profiles.

However, this information will not be based on a fully assured, bottom-up review of plans. This will be completed in March 2019, and will be updated annually during CP6. Since it will not be possible to match exactly Network Rail's income in the Final Determination with expenditure, it is likely that some form of working capital flexibility will be required.

Our discussions with DfT and ORR on the mechanics of grant payments in CP6 are ongoing.

Indexation

We welcome ORR's commitment that its decision to annually increase charges and other contractual payments (including network grant) in CP6 by CPI should not affect the funding that we receive in cash prices. It will be important, however, that ORR identifies all areas of the CP6 settlement that this change affects to avoid any unexpected consequences.

5. Charges and incentives

We welcome ORR's log of the PR18 charges and incentives decisions that it has taken to date. This section responds to two key aspects of the charges and incentives regime on which ORR is yet to conclude.

Changing the structure of Fixed Track Access Charges

During PR18, we have highlighted the need to improve the incentives that we currently face to grow traffic, particularly in light of ORR's decisions to remove the Capacity Charge and Volume Incentive.

We support ORR's new Infrastructure Cost Charge (the new name for FTAC) proposals. It is important that implementation of these changes does not subject us to significant financial risk. We welcome ORR's recognition that it is appropriate to cap our exposure to downside risk in this area.

ORR discusses an 'upside only' option. This would recognise that we are unable to reduce our fixed costs in the short term, if traffic levels are lower than expected. However, we recognise that ORR may be attracted to exposing Network Rail to some downside financial risk in CP6 to financially incentivise us to grow traffic under more scenarios.

Based on discussions with ORR, we understand that the £280 million level of financial exposure in CP6 in the Draft Determination was an error and ORR plans to limit our financial exposure to approximately £50 million. This level would be much more reasonable, given our limited ability to flex our fixed cost base in response to changes in traffic levels.

Any adjustments to charges should be based on a CP6 traffic forecast against which we have a realistic chance of outperforming. An unachievable baseline is likely to be demotivating and will not encourage us to grow traffic on the network.

Sustained Poor Performance

We welcome ORR's recent proposal to increase the Sustained Poor Performance thresholds for CP6 to 25 per cent. This will improve industry relationships and provide a more realistic financial incentive. We submitted our response to ORR's proposals in July 2018.

6. Holding Network Rail to account

We broadly support ORR's proposed approach for CP6, but there are a number of areas where we believe changes are required.

Role of scorecards

We welcome ORR's confirmation that it will focus much of its monitoring and reporting of our performance on routes and the SO, and the importance of scorecards to inform this.

We agree with ORR's principles relating to our internal governance arrangements. We have explained to ORR how our current arrangements meet these principles and will provide updates to ORR as they continue to develop.

We recognise some of ORR's reservations on the governance and assurance process for the definitions of consistent scorecard measures. We will publish definitions for these and centrally assure them.

The current baselines for CRMP, FDMR and network sustainability, subject to any further changes in ORR's Final Determination, will form the basis for reporting at the start of CP6. As our forecasts are updated through the continuous business planning process and engagement with customers, these will be included in route scorecards. Like ORR, we see increased value in scorecards where they are informed by, and agreed with, customers. Where agreement is not reached, it is likely that ORR would scrutinise performance more carefully.

During CP6, we will continue to work with customers to update customer performance trajectories during CP6.

We agree with ORR that delivery below the regulatory minimum floors would be likely to trigger an initial investigation. We believe, however, that any initial investigation should focus on considering the circumstances behind performance decline as opposed to investigating a possible licence breach. A formal investigation into whether Network Rail has breached its licence would only follow the issue of a 'case to answer' letter by ORR.

Managing change in CP6

We are pleased that ORR has accepted our proposal to express the managing change criteria as financial thresholds. However, we are concerned that ORR has rejected our proposal that the criteria to meet a level II or level III change are more significant. Specifically, we proposed that a material reduction in funding below the route/system operator base plan should constitute a level III change. We do not agree with ORR's conclusion to define a level III change as any reduction to the core budget of a route.

Route budgets change regularly and decisions to agree changes are often made by our Executive Committee. We continue to believe that unless a level of materiality is applied, it will result in a disproportionate regulatory involvement in our regular budgeting process (e.g. a £1 reduction in route expenditure should not trigger the level III change process). We do not think this is in line with ORR's aims. We propose, therefore, that we continue to discuss what a suitable level of materiality should be in CP6 in relation to the definition of a level III change.

It is also important to clarify the definition of a 'reduction in funding'. Our understanding is that the criteria to define change relate to a reduction in route funding for the whole control period. This will need to be confirmed in the Final Determination.

Review of Network Licence

We support ORR's aim to better reflect our devolved structure in the Network Licence and to align it with changes to the regulatory framework.

It will be important to ensure that the allocation of obligations does not unduly constrain how we operate as a business or make accountabilities unclear.

Given the intended scale of licence change, we consider that ORR should carry out a formal review in early CP6 to allow an assessment of whether the reform of our existing licence has achieved the desired outcomes and to make any adjustments needed to reflect the way the business operates.

Monitoring and reporting in CP6

We disagree that Network Rail should continue to report on a scorecard measure where we have demonstrated that it is no longer fit for purpose. This is to avoid unnecessary and inefficient reporting (e.g. reporting on ten routes in CP5 for regulatory purposes, when our operational structure has comprised eight routes since the beginning of CP5).

Our SBP set out our commitment to monitor and report on reactionary delay. We agree that this data should be made public and we propose to include this in our Annual Return. We will agree a reporting protocol with ORR for CP6, which will set out the arrangements for regulatory reporting.

Efficiency and financial performance in CP6

While we agree with many aspects of ORR's conclusions, we remain concerned about the impact of using CPI as the uplift factor for cost baselines, in the consideration of efficiency measurement. As ORR has recognised that Network Rail's overall costs increase by more than RPI, the measurement of financial performance needs to take this into account. This will enable consistent comparison of costs between CP6 and preceding years.

We are concerned about ORR's guidance on efficiency calculation. We will work with ORR to agree the methodology and ensure a consistent approach for CP6.

We remain concerned that ORR's proposals to label cost movement as 'efficiency' are misleading. We consider that 'cost movement index' is a more accurate description. The costs of delivery are impacted by factors beyond efficiencies (e.g. scope changes). While it is helpful that ORR recognise that our fishbone analysis should provide analysis of significant cost drivers, most stakeholders will focus on ORR's headline reported efficiency figure.

7. Stakeholder engagement

We recognise that we need to further develop our stakeholder engagement processes. We are developing a stakeholder engagement framework for CP6 that addresses the areas for improvement identified by ORR. This includes proposals for the publication of an annual stakeholder report for each route and the SO. Routes and the SO would assess the quality of engagement against consistent criteria, which would also be reviewed centrally.

It will be important that ORR’s approach to assessing the quality of route/SO stakeholder engagement is informed by our framework. We propose that ORR uses a risk-based approach based on the results of our assessment (as well as any direct feedback to ORR from stakeholders).

We will also continue to develop our approach to supplier engagement.

Railway Boards

We welcome ORR’s support for Railway Boards (which were previously called Supervisory Boards).

We have reviewed the effectiveness of the Boards that are currently operating. We have also considered what ORR needs from Railway Boards for it to be able to take them into account when monitoring routes’/the SO’s performance, as well as requirements from DfT.

This has resulted in a number of changes to the remits of Railway Boards to strengthen their accountability. This includes a role to involve stakeholders in the annual business planning process, to agree and deliver route scorecards and to hold the routes to account by escalating concerns to ORR. We consider that these changes will allow ORR to take Railway Boards into account when monitoring routes’ performance in CP6.

We also intend to set up a FNPO Railway Board. We are currently discussing this with our customers to agree how we manage the meeting, recognising their different business needs.

The inaugural meeting of the SO Advisory Board took place in July 2018.

8. Update on risks and opportunities in CP6

We welcome ORR’s agreement to the risk funding levels included in the SBP. We summarised the financial and non-financial risks to successful delivery in the SBP. The key risks include our ability to deliver the planned level of work, efficiency savings and train performance improvements.

It is important to recognise that we still need to mitigate these risks to enable successful delivery during CP6. This is further highlighted by developments since the SBP. As already described, there is a significant shortfall against train performance target in 2018/19. This reinforces the uncertainty in forecasting which can result in major variations in Schedule 8 payments. The investigation into the current timetabling issues is likely to result in proposals for change. This could include, for example, an increase in System Operator resources, increasing our CP6 costs.

Our response proposes increases in asset sustainability investment. This puts further pressure on both Network Rail’s and the supply chain’s delivery capability. Each route and national functions’ efficiency savings have also increased from SBP levels, which further increases the risk that we will be unable to deliver the overall planned savings.

Since the SBP, DfT has confirmed the budgetary flexibility that will be available during CP6. We acknowledge this provides greater flexibility than most public sector bodies. However, our ability to adjust budgets during CP6 will be constrained which increases the risk that we will be unable to use the full CP6 funding to deliver the planned CP6 improvements.

The funding of CP6 enhancements is being managed through a separate ‘pipeline’ process. As funding is confirmed, this may present both risk and opportunities for our operating, maintenance and renewals plans. For example, as HS2 continues to be developed this may result in changes to the cost of work that needs to be delivered by LNW route. We are currently sizing the Infrastructure Projects teams to deliver around £22 billion of renewals and enhancements in CP6. If there is a material reduction or delay in work, there is a significant risk that there will be unfunded costs.

Some assumptions regarding risk have improved since the submission of our SBP. In particular, ORR has proposed to cap our maximum downside financial exposure resulting from the implementation of the infrastructure cost charge at a level that is significantly less than our SBP assumption.

9. Next steps

The alternative proposal included in this response shows that we have responded to the challenges set out in ORR’s Draft Determination. The routes and national functions have agreed to the proposed changes, which maintains ownership of the plan. We therefore believe that ORR should be able to use our response as the basis for its Final Determination. This would mean that routes would not be required to carry out further replanning following the Final Determination.

Following the publication of ORR’s Final Determination, routes and national functions will update their CP6 plans in early 2019 (notwithstanding Network Rail’s decision to accept or reject the Final Determination in February 2019). This will form the basis for Network Rail’s CP6 Delivery Plan, which will be published in March 2019.

We are working currently with ORR on the requirements to be set out in its CP6 Delivery Plan notice, which we understand ORR will publish around the time of the Final Determination in October 2018. Routes and the System Operator will continue to engage with their customers as they further develop their CP6 plans.

We will also publish final CP6 price lists, consistent with the Final Determination, on 21 December 2018.

Appendix 1: route analysis of alternative proposal

	Anglia	LNE / EM	LNW	South East	Wales	Wessex	Western	E&W total	Scotland	FNPO	System Operator	National functions	CP6 Total
Alternative proposal													
Efficiency	(30)	(90)	(84)	(44)	(29)	(28)	(43)	**(349)**	(56)		(1)	(85)	**(491)**
R&D												(195)	**(195)**
Property												(25)	**(25)**
Asset investment	37	123	136	66	44	83	50	**538**	70				**608**
Safety	9	5	25	4	8	2	4	**57**	1	22			**80**
BTP								**0**	(40)				**(40)**
Performance Innovation Fund												10	**10**
Total	**16**	**38**	**77**	**25**	**22**	**58**	**11**	**247**	**(25)**	**22**	**(1)**	**(274)**	**(53)**
Allocation of central costs													
National function efficiency	(9)	(17)	(19)	(13)	(4)	(8)	(7)	**(78)**	(7)				**(85)**
R&D	(19)	(41)	(44)	(28)	(8)	(18)	(17)	**(174)**	(21)				**(195)**
Property	(2)	(4)	(2)	(6)	(0)	(8)	(2)	**(24)**	(1)				**(25)**
Safety								**22**					**22**
Performance Innovation Fund	1	2	2	1	0	1	1	**9**	1				**10**
System operator								**(1)**	(0)				**(1)**
Total	**(29)**	**(60)**	**(63)**	**(46)**	**(12)**	**(33)**	**(25)**	**(247)**	**(27)**	**0**	**0**	**0**	**(274)**
Fully allocated total	**(13)**	**(22)**	**14**	**(20)**	**10**	**25**	**(14)**	**0**	**(53)**	**22**	**(1)**		**(53)**

Anglia Route response to ORR's Draft Determination

31 August 2018

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Executive Summary

The key areas to highlight in relation to the ORR's Draft Determination response are:

1) ORR's proposal to fund additional investment to improve asset sustainability from an additional efficiency stretch alongside a reduction in R&D funding

- Anglia Route firmly believes that it is unable to commit to more than a £30.0m contribution to the Network Rail wide £660m efficiency stretch without importing an unacceptable level of additional risk into our plan.
- The additional scope to be taken forward as part of the asset sustainability funding has not been developed to the same extent as the core plan and as such has a higher level of uncertainty around delivery at this point in time.
- Anglia Route supports investing in R&D at a higher level than the £100m shown in the ORR's Draft Determination.

2) Train Performance

- We have now agreed performance trajectories with two of our four lead TOCs. We believe that the trajectories are stretching but realistic.
- Anglia Route believes however that the CP6 Year 1 performance trajectories are likely to be re-profiled and a review will be completed this autumn through the Annual Target Setting Process.
- Anglia Route continues to highlight the risk to overall train performance from the introduction of new fleets as well as significant timetable changes and the full opening of the Elizabeth line.
- As a result of the above point, Anglia Route requests that the ORR agrees an option to re-open the Schedule 8 Network Rail benchmarks (which are linked to the performance trajectories) mid-way through CP6, once the effects of operator and infrastructure change programmes are fully understood.

Anglia Route is working with its industry partners and third-party investors to deliver a high performing railway and improve the passenger experience in this diverse and growing region. We welcome much of the ORR's Draft Determination and are working to update and refine our plans. This response covers the critical areas we are focusing on.

Asset Sustainability

Anglia notes the ORR's view that an additional volume of work is required to address the forecasted fall in asset condition across Network Rail during CP6. Within the Anglia Route Strategic Plan for CP6 (RSP), overall asset condition is not expected to fall. Therefore, the sustainability schemes that we have identified have been chosen as the best schemes to improve asset condition whilst also taking account of their safety impact, workforce environment and deliverability. Additional schemes should complement, and not comprise the delivery of, the core works included in the RSP.

Efficiency

The determination has given a challenge to Network Rail to increase efficiency above the profile committed to in the RSP. Anglia Route believes that the 8.3% efficiency we have committed to in the RSP is both realistic and challenging, and we have concerns that an additional stretch may increase the risk of financial under-performance and deferral of activity.

However, we have revisited our efficiency plans as well as challenging the likelihood of headwinds materialising. As a result Anglia Route will commit to an additional £30.0m of net efficiency across our OM&R plan.

Performance

Performance plans have been developed and trajectories refreshed following further consultation and work with our train operators. Concerns raised in the Draft Determination in respect of the modelling have been addressed as part of this work.

Constructive technical discussions have been held, and are on-going, with our lead operators. Updated strategic narratives have been shared with all operators to work towards gaining agreement. As a result of additional evidence provided by the operators on their performance improvement plans, we have reached agreement with and adjusted trajectories for two of the Route's lead operators (with consequent changes made to the CRM-P trajectory).

We highlighted in the recent 'PR18 SBP Performance Challenge' meeting with the ORR that assurance cannot be given that Q1 18/19 performance issues will not impact upon CP6. The re-profiling of CP6 Year 1 performance trajectories is likely and this process will start at the end of September. Any changes made will be reflected in the RF8 submission.

There is a significant level of change during CP6 for our operators, including new rolling stock, revised timetables, and the full opening of the Elizabeth Line. Whilst there has already been significant work completed between both Anglia Route and the operators to plan for these changes, as well as to mitigate performance risks, there is still a high level of uncertainty. Given the size of the financial risk associated with Schedule 8 payments in this environment, Anglia Route requests that ORR agree an option to re-open the performance benchmarks for all TOCs mid-way through CP6, once the impact of the changes has been fully understood.

We continue to work with all our operators towards strengthening delivery capability and developing stronger links in wider performance planning.

Sustained Poor Performance Threshold

Anglia Route welcomes ORR's proposal to increase the Sustained Poor Performance (SPP) threshold from 10% to 25% for CP6. We believe that the change is an important one that can help to maintain focus on industry performance schemes whilst also providing train operators with adequate financial protection in times of sustained poor performance.

Group Portfolio Risk Fund

We note the ORR's determination proposal that more of the Group Portfolio Risk Fund will be allocated directly to the Route to manage. This could enable the Route to respond more quickly to the emergence of risks, as well as maximise the opportunity to invest in additional contingent renewals should risks not materialise.

Financial Framework

Under the CP6 Financial Framework, Network Rail will be limited to 10% deferral on capex and 0.75% deferral on opex, amongst other new budgetary limitations. We understand that discussions are ongoing with Government to clarify what the baselines for change will be in CP6.

Research and Development Funding

The Draft Determination reduced the CP6 SoFA funding for Network Rail R&D to £100m. Anglia Route supports Networks Rail's proposal to invest £245m of SoFA funding in CP6 on R&D. There has been good visibility of the proposed R&D programmes and we support the view that this level of spending on R&D during CP6 will materialise in route efficiencies in CP7 and beyond.

Detailed response

Anglia Route has actively and positively responded to the ORR's recommendations and conclusions with regards to asset sustainability and efficiencies. We consider that our core plan is a well-developed and bottom up plan that we have high levels of confidence around. As such we believe that incorporating further efficiencies into the plan in order to fund additional asset sustainability and safety schemes may introduce undue risk into our plan.

Asset sustainability

Anglia notes the ORR's view that an additional volume of work is required to address the forecasted fall in asset condition across Network Rail during CP6. Within the Anglia Route Strategic Plan for CP6 (RSP), overall asset condition is not expected to fall.

Therefore, the sustainability schemes that we have identified have been chosen as the best schemes to improve asset condition, as measured by the Composite Sustainability Index (CSI), whilst also taking account of their safety impact, workforce environment and deliverability.

The exact volume of work delivered will be dependent on the amount of funding that is identified. Currently the assumed budget is £37m, which would attain a CSI improvement of 0.0175%. Appendix A provides a prioritised list of schemes totalling £158.5m. It should be noted that we do not expect a performance improvement from this additional sustainability investment; many of these schemes fall into the latter part of the control-period and are not performance focussed schemes.

Additional schemes should complement, and not comprise the delivery of, the core works included in the RSP and are based on works that were not affordable within the original RSP funding envelope. Priority is based on deliverability of packages, taking into account the best benefit against sustainability. Consideration has been given to the track access requirements as additional disruptive possessions will not be available on key parts of the Route. Availability of supply chain resources has also been considered.

Time constraints have limited development to a level which cannot give total confidence on every scheme. However, as there are many opportunities for improving the CSI score it is expected that there will be some scheme substitution during the control period.

The contracting strategies for the additional work will be aligned to the delivery of the CP6 work bank so it is assumed that this additional volume would support the challenging CP6 efficiency targets.

Efficiency

We note ORR's conclusions with respect to financial efficiency, and the view that Network Rail's plan has not been sufficiently stretching in this area. In the weeks since the publication of the Draft Determination we have challenged again our efficiency plans, and shared best practice with other Routes, to look for any additional changes we can make to drive further efficiency. As a result of this exercise, we have developed plans for a further £15.4m of efficiencies and are willing to accept a challenge for a further £14.6m for which plans will need to be developed. In total, this £30.0m of efficiency stretch, increases Anglia Route's OM&R efficiency from 8.3% in our RSP to 9.58% in this Draft Determination response.

We have taken a holistic view of the impact of these additional efficiencies - and additional investment in asset sustainability and safety – on the deliverability of our plan. Our view is that any commitment above this figure would import an unacceptable level of additional risk to our plan:

- One of the key efficiencies in our renewals plan is maintaining a stable workbank. Introducing significant change to our work bank may put this efficiency under strain.
- We have only introduced additional efficiencies where a bottom-up plan can be demonstrated. The use of top-down overlays would undermine the credibility of our plan with internal delivery agents and other stakeholders.
- The efficiency plans in the RSP have been worked up over the last two years and will start to materialise in the first year of CP6. Efficiency plans that are only now in development are unlikely to be realised early in the control period and so the associated opportunity is reduced.

The report by Nichols on our national headwinds and efficiencies took a view that some of the headwinds we had articulated in our RSP were not sufficiently robust or were mischaracterised. Anglia Route faces a number of specific structural changes in CP6 which are genuine headwinds against CP5. The launch of the full Elizabeth Line service in 2019, as well as major timetable changes and fleet introductions for our Train Operators, present considerable challenges to our existing working practices e.g. availability of access.

However, we have reviewed our headwind provisions while being mindful of the challenge over categorisation in the Draft Determination. This review did identify some areas that on reflection are 'risk' issues that we will seek to eradicate, mitigate or reduce. These have been removed from the core plan and subsequently fed into our 'risk and uncertainty' analysis which drives the 'headroom' and Group Portfolio Fund allocation.

Safety expenditure

The Draft Determination included an allocation of £80m for additional safety compliance. Anglia Route took note of the Draft Determination proposal relating to level crossings in LNW and Wales Routes and as a result we have been allocated £8.54m of the fund. This will deliver an additional volume of miniature stop lights (MSL) at our highest risk user worked crossing (UWC) sites and will undertake additional safety improvements at our high risk footpath crossings.

Asset Management

We note the concerns from the ORR regarding the omission of major interventions from the structures plan. Anglia Route has a number of significant structures and due to funding constraints is not planning to undertake major interventions to these assets. The Route has reviewed its strategy and is confident that the volumes within the submission will be sufficient to manage the risk of failure. Anglia recognises that this may have an impact on the volume of work for future control periods and that this strategy may not give the lowest whole life cost, but it has had to allocate the available funding to other higher priority assets.

Performance

We note Arup's conclusion that their "confidence of the CRM-P trajectories is that … Anglia are both realistic and stretching" (1.5.7) and that they have the same view of confidence in delivery of the Greater Anglia, London Overground and c2c PPM outturns as our views, but that the TfL Rail outturn is broadly more stretching (section 4). We have worked with our train operating colleagues to understand all the feedback on our plans – including direct feedback from operators through industry fora such as NTF and RDG working groups; reviewed the assumptions in our performance plans; and clearly set out the contributions to train performance from all industry partners.

Working with London Overground and c2c, we have agreed revised PPM trajectories based on new evidence for greater confidence in improvement, with balanced adjustment to the route CRM-P trajectories. For Greater Anglia, whilst there is scope for performance benefits from planned service improvement programmes (the 'NEAT' programme, and subsequent timetable change), these are expected to be balanced by risks to performance and there is uncertainty around material change to these programmes and we have proposed that we do not change the trajectories at this time. For TfL Rail, our expectation is that performance levels for the full Elizabeth Line service will broadly match those currently achieved for the current Shenfield-Liverpool Street services on the Anglia route. Modelling has highlighted that the mobilisation programme for the Elizabeth Line will need to facilitate performance improvements if we are to achieve these levels.

We continue to work with all our operators to strengthen our performance modelling and develop risk management and joint performance improvement programmes. We will soon begin the process of agreeing operator's scorecard targets for 2019/20, which will give further consideration of these plans. This will also need to take in to account any required recovery plans arising from under performance during Q1 2018/19.

As discussed at our meeting with ORR on performance on 10th August, Anglia Route does not believe it is appropriate to include CrossCountry performance on our scorecard as we are not the lead route. We are increasing our engagement and governance with CrossCountry through the regular joint sessions on cross-route performance improvement lead by the FNPO Route.

Stakeholder engagement

We value the ORR's views on our stakeholder engagement. We are committed to improving our stakeholder engagement and are developing our strategy for continued engagement in CP6. Further engagement workshops are planned where we will work with our stakeholders to explain the changes to the plan we have made through the Draft Determination consultation.

Service Affecting Failures

Anglia Route has reviewed its Service Affecting Failure (SAF) forecast and is satisfied that a 3% improvement represents a significant challenge.
On Anglia Route there was a step change in the number of SAF failures between year 5 of CP4 and year 1 of CP5 (a 13% improvement) however the change in SAF between year 1 of CP5 and the target for year 5 is small at 1.9%. Recent asset performance over the exceptional summer period is likely to result in negative improvement in years 1 to 5.

During CP6 there will be a significant change in the volume of trains, the majority of these trains are new, some new to the UK, and the impact of these new trains is currently not fully understood. Furthermore the introduction of new timetables will have an impact on the availability of access to undertake maintenance and renewal activities.

We have taken into consideration the impact of the additional traffic and new trains, looked at the benefit derived from the renewals work bank, reviewed the benefits which can be delivered from proposed improvements in systems and processes to predict and prevent asset failure, and have concluded that a 3% improvement in SAF is challenging and realistic.

Appendices

Appendix A – Anglia Route Draft Determination Response – Asset Sustainability V1.0 July 2018

Freight & National Passenger Operators (FNPO) response to ORR's Draft Determination

31 August 2018

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Executive Summary

Our main area of concern in relation to this consultation is: **Providing capacity and capability** for freight and new passenger services, which is key to the future growth and retention of existing business of FNPO customers. Identifying and securing additional capacity through Network Code changes and the access rights process are areas we will explore. Maintaining the published operational capability of the rail network is particularly essential to freight and charter operators.

Freight & National Passenger Operators (FNPO) welcomes the comments and decisions the Office of Road and Rail (ORR) have made in the FNPO Draft Determination. It reflects what we believe is a strong Route Strategic Plan (RSP) for the next control period and builds on the work of the first two years, since FNPO was established as the ninth Network Rail operational, or "virtual route". The ORR decisions within the FNPO PR18 document, generally support our proposals in the FNPO RSP including:

Safety – Much of our safety focus remains on freight derailments and asset management. However we are pleased the ORR recognises that funding is required to address and mitigate safety risks for FNPO customers and £22m of funding for the FNPO Safety Improvement Programme (FSIP) is recommended and needs to be included in the FNPO baseline plan. Details are provided on the FSIP in Appendix A

Rail Freight growth – MDS Transmodal updated the 2013 Freight Market Study with a new forecast in 2017 to support the FNPO RSP. This has indicated a 15.6% increase in traffic lifted from the base in 2016/17 until the end of CP6 in 2023/24. We have consulted widely with the industry on these findings and the feedback from consultees, broadly aligns with this predicted growth. We recognise the ongoing macro-economic challenges that may affect anticipated growth rates.

Performance – For both freight and national passenger operators, the ORR has been clear on its views and expectations for the next control period. The Freight Delivery Metric (FDM) baseline will be set at 94.0%, which in itself will be challenging given where we are currently and has been seen as being at an appropriate level by the ORR. CrossCountry targets are challenging, but through the use of the FNPO and route scorecards, as well as working with and holding the routes to account on delivery, we consider that performance can be maintained at levels acceptable to the customer. The Caledonian Sleeper right time target is 80% in 2018/19 and each year through CP6. Whilst this is stretching, both FNPO and Caledonian Sleeper have activities in place to achieve this target. For all customers FNPO has agreed Joint Performance Strategies and FNPO considers this concept appropriate for CP6.

Charters – Our key priorities for CP6, remain the development of strategic capacity in order to secure business certainty for charter operators; and to achieve the eradication of effluent discharge across the network.

Capacity & Capability – Providing capacity and capability for freight and new passenger services is key to the future growth and retention of existing business of FNPO customers. Identifying and securing additional capacity through Network Code changes and the access rights process are areas we will explore. Maintaining the published operational capability of the rail network is essential to freight and charter operators. ORR recognises and endorses the importance of both issues and holds Network Rail accountable for providing capacity on the network and for maintaining capability on each route as published.

Access Charges & Schedule 8 – Network Rail supports a broadly stable infrastructure charging position for freight in CP6 and recognises this helps support existing traffic and growth which is important to freight and core to the CP6 SBP. Ultimately it is not just about the level of charges, but the overall financial / funding proposition for freight. Network Rail also supports the principle of cost reflective charges, though recognises that capping / phasing may be appropriate. However, any changes to ORR's proposed caps/phasing would mean reductions in other Network Rail activities and programmes for CP6 recognised in the ORR's Draft Determination, given the fixed funding in the SoFA.

For Schedule 8, there is clear evidence that ORR has set the freight benchmark at a level that will lead to c£5m of Schedule 8 payments annually from NR to freight operators. This c£5m will be reflected in the NR benchmarks in the passenger regime. Therefore, NR should not by design be financially adversely affected by ORR's decision. However, this issue will need to be addressed in the internal NR money flows between FNPO and the geographic routes so as to avoid the perception that FNPO is loss making throughout CP6.

Freight incentives – ORR's removal of the volume incentive and introducing the variable Infrastructure Cost Charges for passenger operators results in no financial incentive to grow freight for route businesses. We believe Network Rail should be financially incentivised to grow rail freight to maximise the economic and environmental benefits associated with it. We urge ORR to consider its proposals in this area.

Customer Satisfaction – FNPO will continue to apply and evolve its existing route and customer scorecards, which now number 12 and over 250 metrics. In addition through regular customer and stakeholder satisfaction surveys, FNPO can directly capture the evidence of the views of its customers and stakeholders and the quality of that engagement

Scotland – Transport Scotland has set very clear requirements in its HLOS on a number of areas of FNPO responsibility including: targets for the growth of rail freight in Scotland; ensuring the network in Scotland is appropriately gauge cleared and proposals to improve journey times, capacity and timetables. We are already responding to the ORR's requirements and these activities will be delivered through and with Route Business Scotland and System Operator

HS2 – Since the submission of the FNPO RSP in February 2018, we have appointed a Programme Manager to work with both internal and external parties in the development of HS2 plans where rail freight is concerned. This role is already supporting crucial planning activity, raising awareness on the scale of opportunity and challenge the construction of HS2 will bring

During the detailed discussions with the ORR since February 2018, it became clear that a number of key actions need to be developed and delivered. FNPO can confirm commitment to these as part of the ORR decisions detailed in the settlement document. These relate to the following with an update of progress below each:

- Publish and maintain its governance and reporting framework, so that its stakeholders understand the interfaces between FNPO, geographic routes, the SO and other parts of Network Rail

  FNPO are developing detail on the governance and framework arrangements and will share of these with stakeholders and the ORR during September 2018

- Provide greater clarity on the role of the FNPO Supervisory Board and how this provides assurance to its customers around delivery

  FNPO is intending to set up a Supervisory Board. The terms of reference for this meeting will be consistent with other Route Businesses Boards. We are in discussions with our customers to agree how we manage the meeting, recognising their specific business needs

- Publish annually a report on its activities and achievements, clearly setting out how these relate to each customer group (freight, national passenger operations, charter and aspirant open access)

  Collation of value added activities and achievements are already being stored to form part of the annual report for each key customer group FNPO manages the relationship of

- Continue with its annual stakeholder survey (and supporting pulse checks) to directly capture evidence on the quality of its stakeholder engagement

  These surveys and pulse checks are taking place and FNPO will continue to enhance these, as well as act on the information provided in these for the remainder of CP5 and into CP6

- Roll out its proposals for end-customer scorecards

  FNPO are developing an end-user scorecard and have shared a draft with over 50 end user stakeholders in July 2018. Feedback and views will be included in the final version, which will be briefed in

- Identify and publish milestones on those aspects of the Route Strategic Plan (RSP) that were not sufficiently well-progressed to have clear milestones attached at the time of publication

  FNPO has clarified all of the milestones for its Route Strategic Plan and removed all TBCs. These will be included in an updated iteration of the FNPO document, which will be made available and shared with stakeholders

Detailed response

Asset sustainability

In the FNPO February 2018 submission we discussed in Section 5 (5.22 Freight Network Optimisation) about a review into freight only lines and infrastructure. Since then, we have scoped the potential benefits of this opportunity and will review this again during CP6.

In recognition of the importance of a reliable freight network to our customers, we have added the Freight Asset Management measure for CP6. This is intended to measure the performance of network assets along the primary freight corridors. Working with colleagues, we have been able to define the freight geography used and are now establishing the CP5 baseline against this metric. We expect to propose a target based on improvement from the CP5 baseline position.

Safety expenditure

FNPO welcomes the ORR's commitment to support creation of an FNPO Safety Improvement Programme (FSIP), which will target safety improvement initiatives for our customers. This includes a safer environment in yards and sidings.

Whilst it remains necessary for drivers and ground staff to conduct train crew relief and to attach, detach and prepare trains it will be necessary to maintain facilities in network yards and sidings to support these activities being done safely. Our customers have also welcomed the creation of such a programme to support improved conditions for their staff.

Our next steps will be to create a framework to consider proposals raised from various industry parties for safety expenditure during CP6 which will improve on-network safety performance.

Appendix A (pages 10 and 11), summarises our expenditure plans and governance framework for the £22m, which includes focus on derailments in yards and sidings and working closely and collaboratively with our customers on Signals Passed at Danger.

The positive developments in freight industry safety collaboration during the current Control Period has enabled a more inclusive and structured debate about the whole industry risk profile. This has identified the key areas to concentrate our efforts on through industry groups such as National Freight Safety Group (NFSG) and it is anticipated that this focus will continue into CP6 and will support other opportunities to improve safety, such as in terms of common methods of working.

The introduction of safety metrics on the scorecards has focussed our safety discussions with our customers around the areas of customer LTI events, commercial freight and NPO SPAD's and derailments. Much industry effort continues in the Cross Industry Freight Derailment Working Group (XIFDWG) and also SPAD investigation and root cause analysis by our customers.

In CP6, as well as the standard safety metrics, FNPO has been investigating other ways of measuring safety. We continue to work on a metric that will use the logic around RM3. Our discussions with STE colleagues have suggested that a Freight 'cut' of the national PIM scores would not be rigorous and so may be of limited value. As such we are proposing to remove this metric.

Efficiency

FNPO will continue to review and identify efficiencies by combining activities within teams within FNPO, rather than placing these in other parts of the business. This will continue in CP6 and addresses the observation by the ORR in the draft settlement document. We will also seek to find savings and efficiencies within other areas of the business though collaboration with our customers and industry stakeholders.

Performance

FNPO welcomes that ORR considers 94.0% FDM (94.5% FDM-R in Scotland reflecting an HLOS target) as an appropriate baseline against which to hold FNPO and route to account for freight performance. Appendix B summarises our FDM – R targets and the methodology applied in calculating the targets. As laid out in our RSP it will be a real challenge to continue to deliver performance at levels seen in CP5. To add to the scale of the challenge, our CP5 exit forecast for FDM is now 93.5%. We have developed a plan to look to improve this position through the remainder of 2018/19. The plan focusses on short term actions aimed at improving performance under five key themes. These themes are communications, timetable planning, weather resilience, asset reliability and network management. These themes will form the basis of our performance plans into CP6. Network Rail welcomes the ORR support for the proposed level of regulatory floor for freight.

We also welcome the need to have CrossCountry represented on each route scorecards over which they operate. Work is underway to put this in place and have agreed a change to the Wessex target so that right time performance is measured at Reading rather than the route boundary. This shows a collaborative approach from Wessex – whose performance will be judged at a station not on their route. We will work with both Wessex and Western to achieve this. Discussions are ongoing with LNE&EM and Western to agree appropriate targets and Anglia accepts the need for better engagement with CrossCountry and is reviewing ORR's expectation to include a measure on its route scorecards, balancing the needs of other customers who operate similar level of service on the route – with a meeting in place with CrossCountry to discuss this in September 2018.

FNPO is very aware that CrossCountry performance is not where it should be – and this is reflected in the fact that they appear at level 2 of the Regulatory Escalator. In the lead up to CP6 we will work with each individual route to understand their glidepath for CrossCountry delay. Where gaps exist we will work with them to identify further activity and schemes to reduce delay. Progress will be reported to the ORR on a periodic basis. FNPO will start the scorecard process with our customers in September 2018, learning from the lessons of last year and to improve how we engage with and seek agreement of the scorecard and their metrics with customers.

Schedule 8

The recalibration of the freight Schedule 8 regime for CP6 has been conducted via a joint industry working group, at ORR's request. This working group has attempted to reach a consensus on the methodology for the recalibration of the Schedule 8 parameters, however on a few occasions it has been extremely difficult to reach agreement with freight operator's due to the potential financial impact of decisions that changes to the regime would have on both NR and the FOCs. Therefore, this has not been a task that necessarily lends itself to such a collaborative process.

Whilst the Draft Determination has not specifically commented on the various metrics that make up the Schedule 8 regime for freight, ORR has been heavily involved in the freight Schedule 8 recalibration. ORR has reviewed industry proposals for the recalibration and has determined the methodology (on occasion approving the industry-agreed position).

As Network Rail has stressed on several occasions to ORR, we are extremely concerned that some decisions made by ORR will result in far greater Schedule 8 payments from Network Rail to FOCs compared to the current control period (e.g. ORR's decision on the Freight Operator Benchmark). Whilst Network Rail is, overall, financially neutral to ORR's decision on the Freight Operator Benchmarks, due to the Star Model, passenger train operators (and ultimately DfT, Transport Scotland and other franchise operators) would bear the cost of the unrealistic Freight Operator Benchmark in CP6.

Following a disagreement on the most relevant data sample to be used in calculating the Freight Operator Benchmarks, ORR agreed with the FOC proposal of using a longer recalibration period which NR felt was not reflective of recent performance improvement or the recent change in freight commodity mix. The resulting benchmark would see a shift of c£5m per year in favour of the FOCs if current levels of performance continue.
This amount would be offset by higher Schedule 8 payments from train operators to Network Rail in CP6. NR does not believe that is the most appropriate use of taxpayer funds, and provides no incentive for FOCs to improve against their current levels of performance. On expectation we would expect FOCs to outperform their benchmarks.

Network Rail is also concerned about ORR's decision on Incident Caps for CP6. NR was seeking a change to the current arrangements around Incident Caps, which would have seen FOCs exposed to a proportion of delay over and above their Incident Cap in return for a lower Access Charge Supplement. This would have seen FOCs incentivised to continue to mitigate delay even when the Incident Cap would be reached. ORR disagreed with this proposal, citing lack of time to consider such a change of policy. This is especially disappointing given that NR first wrote to ORR over 6 months prior to the Draft Determination (in December 2017). We also note that Network Rail wrote to ORR asking to raise the level of risk premium in the Incident Cap ACS for CP6, however ORR also found in favour of the FOCs on this occasion and concluded not to raise the risk premium for CP6.

Stakeholder engagement

FNPO note that not all stakeholders felt they had been engaged with as fully through the PR18 process, as they would have wished and we are committed to addressing this. Already, we have had several one to one sessions since the draft determination settlement document was published to improve the engagement and this will continue.

We are committed to improving our stakeholder engagement and FNPO will be publishing a draft stakeholder strategy in Autumn 2018 to describe how it will approach wider stakeholder engagement through the end of CP5 and into CP6.

We are organising two dates for FNPO workshops later in 2018, one for national passenger operators and the other for freight customers and end-users, to update both groups on the progress FNPO is making, details of the immerging delivery plan, as well as detail on the stakeholder strategy, in light of the ORR decisions within the settlement document.

Group Portfolio Fund

We welcome that ORR's draft determination accepted the total value of funding for CP6 financial risk (the 'Group Portfolio Fund') of £2.6bn. We also note ORR's proposed changes to the governance of this funding. We have worked with Group Finance to develop revised governance arrangements for the three categories of risk funding, which reflect ORR's draft decisions. As the majority of risk funding will be held in routes, we will now be responsible for managing all financial risk in our route plans, except those that are truly exceptional. We are continuing to work with Group Finance to agree the detailed arrangements associated with the budgeting for, and use of, the Group Portfolio Fund in CP6.

Other route specific issues

Charters

FNPO are continuing to work collaboratively and positively with charter operators and recently issued a draft 'Developing Charter Train Industry Sustainability' strategy.

The strategy has four main aims including; development of high quality strategic capacity paths on key routes; understanding which routes would benefit from being identified as charter core routes; develop charter response to effluent discharge and to establish the contractual mechanisms required to provide track access rights for charter operations.

Controlled Emission Toilets (CET)

The Network Rail Strategic Business Plan for CP6 stated that 'no trains will discharge toilets onto the track by 2020, which will significantly improve the working environment for our staff and help us to provide a place of dignity and respect'.

FNPO, with strong support from the Network Rail Executive Committee (Excom), have been discussing over a number of months the issue and how we look to solve, as well as funding options and engagement with the charter community in solving this problem with effluent discharge.

The dialogue with the charter community has been to both develop a list of candidate vehicles for the fitment of equipment to prevent discharge to the network, but also think through how the options can be managed while still operating the charter services required.

In July 2018, a paper was agreed at Network Rail Excom to seek to progress CET fitment via a Network Change. Subject to successful establishment of the Network Change, Network Rail intends to provide funding support and work with the charter sector to deliver the fitment programme.

Scotland

Transport Scotland set out an ambitious High Level Output Specification (HLOS) in July 2017 for rail freight and both Route Business Scotland and FNPO have been working closely with System Operator colleagues and the freight industry in Scotland to interpret and respond to the HLOS.

FNPO in conjunction with Scottish Freight Joint Board and other stakeholders, are developing an industry growth plan, a draft of which will be available by 30th November 2018. This plan will articulate the opportunities to grow rail freight in Scotland and what measures are required to secure that growth.

It is envisaged that any capacity constraints will be identified in the growth plan and FNPO will work with System Operator and Route Business Scotland to seek solutions to any capacity challenges.

FNPO will inform the decision on the freight gauge specification and will hold Route Business Scotland to account on retaining gauge compliance. FNPO will also work with System Operator to identify where infrastructure interventions will be required on diversionary routes to allow seamless transfer of diverted traffic.

In addition, FNPO will work with System Operator and Route Business Scotland in developing the business case for gauge enhancements, e.g G&SW route is currently W8, when the core WCML route is W10.

FNPO is providing information and challenge to the Scotland Route gauging strategy and we see it as FNPO's responsibility to ensure that the strategy delivers for freight and charters.

To support delivery of Transport Scotland HLOS requirements in CP6, a significant increase in workload is anticipated. This will require a redefining of FNPO route activity in Scotland, with greater emphasis placed on strategy and developing new opportunities as part of the industry growth plan, as well as the core Network Management activities. FNPO would welcome the opportunity to discuss this further with Transport Scotland and the ORR.

FNPO has secured industry support in defining a metric which will be used to measure freight average speed throughout CP6. Together with Route Business Scotland and the System Operator, FNPO is working with the industry to develop action plans by 30 November 2018. We anticipate continuing engagement with ORR and Transport Scotland to provide greater clarity of the roles and responsibilities across the industry in delivering these plans.

HS2

Since the submission of its Route Strategic Plan, FNPO has recruited a Programme Manager to lead discussions with and champion the requirements of freight customers to support delivery of the defined HS2 construction work packages.

Much of the waste removal from HS2 construction sites and conveyance of aggregate to build the new line is intended to be done using rail freight. Given the scale of these upcoming packages and the reliance on rail freight as part of the logistics solution, The new role will work with our customer base to define and develop solutions with other Route Businesses and System Operator teams to deliver the rail requirements.

As HS2 development continues, this brings many challenges for FNPO customers both in terms of mobilisation for HS2 construction as well as operating their existing freight flows during the construction phase and after the commencement of HS2 services, when HS2 services will integrate with our network. Specific areas of work which will benefit from FNPO involvement include:

- Creating positive engagement between FNPO, HS2 delivery agents and FEU customers likely to be involved in HS2 logistics
- Building a common understanding of work packages and volumes/timescales to meet logistical requirements
- Freight site identification and modification for HS2
- Freight capacity identification for construction traffic for multiple customers, from multiple routes to service HS2
- Securing freight capacity for spoil removal
- Assess property impact on existing freight sites from HS2
- Identification of future capacity on conventional network as part of future timetable scenarios and retention of sufficient capacity post HS2 (e.g. North of Crewe)

FNPO is well informed of the progress being made in this process, the commodity volumes involved, and which locations will likely feature in the materials by rail plan – this information is being shared with key stakeholders within our business whilst we await the final outcomes of the various procurement processes in motion.

The Programme Manager will also be FNPO's single point of contact for HS2 freight queries from within our own business and, in this respect FNPO is already part of a number of the internal and industry HS2 steering groups.

Appendices

Appendix A – FNPO Safety Improvement Programme (FSIP)

Purpose

The FNPO Safety Improvement Programme (FSIP), has been proposed as part of the Freight & National Passenger Operator's (FNPO) CP6 submission, to improve site conditions and safe operations at sites used by freight and national passenger operators to support improvement in safety metrics and to keep our people safe during CP6.

The ORR in its draft determination agreed this as a worthwhile area for funding in CP6, subject to further development of the programme and its governance.

Governance of expenditure

Subject to receipt of an agreed fund as part of the final CP6 settlement, internal governance of expenditure on FSIP projects will be a fundamental requirement. This governance arrangement needs to be agreed and developed well in advance of CP6 commencement to ensure spend profile can be spread evenly during all years of the Control Period. Governance is proposed to be through an FNPO Route Investment Panel consisting of both FNPO and Route representatives. This is to bring a broad experience into the panel including financial, operational and maintenance experience.
The process for scheme development and governance is proposed to work as follows:

1. Identification of Condition (may be NR, FOC or NPO identified) – Proposal form to be completed by the lead Route Freight team
2. National Freight Safety Group (NR and FOCs) or relevant L1 meeting with passenger operator endorse schemes and proposals based on agreed criteria
3. FSIP Programme Manager to draft Investment Paper with support from Route Freight team/CRE team
4. FNPO Investment Panel receives Investment Paper for panel to consider/sign off
5. FNPO provides a WAF to a works deliverer or engages with contractor

The National Freight Safety Group (NFSG), the senior industry safety group for freight, consisting of NR and Freight Operators, will act in an advisory role.

This will include proposing sites and works to be completed to the FNPO team and endorsing proposals on behalf of the sector. In recognition of our national passenger customers such as CrossCountry and Caledonian Sleepers, schemes may also be proposed through operators Level 1 Safety meetings for consideration as FSIP schemes.

The FNPO Investment Panel will be set up to ensure the following objectives are achieved;

- Value for money for schemes – this may include both fully funded or part funded initiatives with another party
- Deliverability including access arrangements required
- Financial control
- Geographic Route engagement and support
- Use of lessons learned/recommendations considering scheme experience

Resources

FNPO Route also intends to appoint a full time Programme Manager for FSIP to manage the processes though scheme proposal, endorsement, costing of works, creation of investment papers and engagement of deliverers. A project accountant will be needed to apply the appropriate financial controls

Delivery

The projects are expected to be delivered via the provisions of Works Authority Forms (WAFs) to the route delivery units who will perform the work and charge their costs to a project set up for this purpose. Securing necessary access will be an integral part of each schemes development.

Learning Review

A Continuous Learning Review will follow activities undertaken throughout this Safety Improvement Programme. This will allow the deliverability and value for money to be tracked with customers to ensure the money is spent on those items providing the greatest benefits to Network Rail and customer safety metrics.

Appendix B – Summary of Changes to R-FDM methodology

Background

1. Freight Delivery Metric (FDM) became Network Rail's Regulatory Measure in CP5 replacing delay minutes per 100Km. This change was stakeholder led, developed through joint working sessions, and seen as more representative of what customers want. The metric has three key elements:

    a. Lateness at termination (with a fifteen minute threshold)
    b. Delay minutes (not all delay counts as an FDM failure)
    c. Service variation and cancellations (SV&C)

2. FDM is a reliable and robust measure. In October 2016 an independent reporter review on behalf of the ORR was carried out – which scored 'B' for reliability and '1' for accuracy.

3. Initially FDM was only reported nationally. However, to understand performance at route level, R-FDM was developed. The three basic elements mentioned above were still used to calculate values – whether the train is late, whether it is subject to an SV&C claim from the operator and whether it has received more than 15 minutes of qualifying delay. However there were some key differences:

    a. Under the R-FDM methodology double counts could occur when two Routes both caused 15 minutes of delay to the same cross-Route boundary train. This could result in one national FDM failure but two or more R-FDM failures.
    b. A number of trains are national failures only – without 15 minutes of delay on any one route (effectively reverse of the first difference).
    c. Not all SV&C events have assigned TRUST incidents (making accurate mapping to R-FDM impossible).

4. The differences outlined above meant that there was no direct relationship between the two measures. It also made it impossible to aggregate R-FDM up to FDM or vice-versa. Given some of the issues around double counting and allocation of SV&C it was felt that R-FDM was not as robust a measure as FDM.

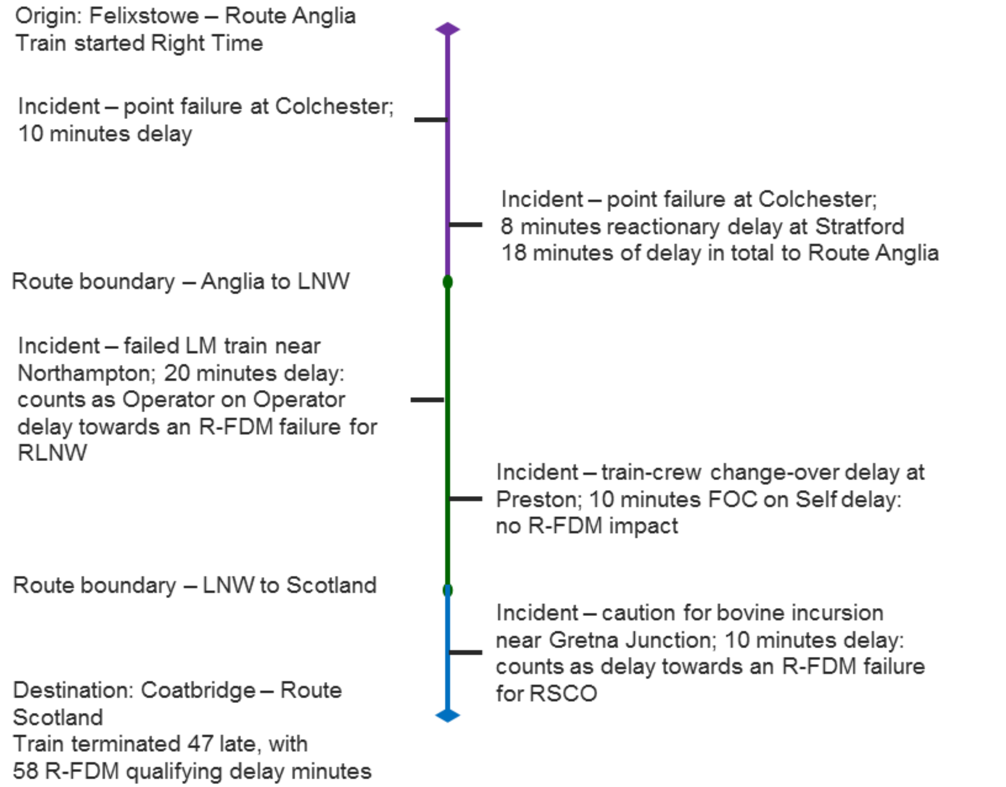
Move to 'Proportional' Methodology for R-FDM

5. To overcome this problem a new methodology was developed – called proportional R-FDM. Key elements of the new methodology are:

    a. National failures are now correctly assigned to one or more routes. This also allocates the failures where no individual route creates 15 minutes or more of qualifying delay minutes. Each qualifying R-FDM train has its delay minutes proportionally split by each affecting Route. This process has removed the double count issue.

b. A new process has now been put in place in which each SV&C claim from an operator is allocated to a route when received. A historical data exercise was also carried out to map circa 5,500 CP5 SV&C to a Route. This allows us to accurately understand the impact of these types of failure by route rather than just using an uplift.

6. The new methodology helps us have a much more accurate R-FDM figure and the ability to aggregate R-FDM to FDM (subject to minor data quality issues). An example of the working is contained in the diagram below.



Summary:

- Train is a National FDM by failure of lateness and delay thresholds.
- Train counts as an R-FDM failure for Anglia 0.48; LNW 0.35 and Scotland 0.17
- Under old methodology would have been 2 R-FDM failures for Anglia and LNW

Impact of Change on targets defined in Route Strategic Plans

7. Whilst a move to a more robust methodology was the right thing to do, with hindsight the timing of doing so was not ideal. First iterations of Route Strategic Plans (RSP) and CP6 scorecards had already been produced. Internally within the FNPO team we carried out an exercise to compare our first advice on R-FDM targets with how they would look using the revised methodology. The detail of this activity is contained in the table below.

	Wales	Anglia	LNE	LNW	Scotland	South East	Western	Wessex
First advice for RSP	94.4%	92.9%	95.3%	93.9%	95.0%	91.0%	94.0%	93.6%
Proportional method	94.4%	93.0%	95.0%	94.1%	95.1%	88.3%	93.6%	94.6%
% difference	-0.1%	-0.1%	0.2%	-0.3%	0.1%	2.7%	0.3%	-1.0%

8. The review showed that there were only two routes with material differences in the target we recommended at first advice to the target we would have recommended had we always used the proportional methodology. Therefore the decision was made to stick with the original 'first advice' RSP targets. These are the ones that we'd expect to see in final RSPs

9. Changes to the methodology were communicated to the routes via presentations at the Route Performance Management Group and the Analyst Community away day as well as on a one to one basis as part of the target setting process.

10. Following the FNPO advice Routes submitted R-FDM figures in their RSP and CP6 scorecard. It's worth noting that three of the eight RSP contain R-FDM figures that differ from our original advice. These are:

    a. **Scotland** – the Scottish HLOS set out clearly that "Scottish Ministers require that freight trains on the Scotland route achieve an FDM of a minimum of 93% at the start of CP6 moving through staged improvements towards 94.5% at the end of CP6". Even the exit point of 94.5% was well below our initial advice of 95%. Given the clear articulation of expectation on performance (as well as growth and average speed aspirations) we agreed with the Route to flat line the target at 94.5%
    b. **LNE** – the Route published a figure lower figure than we expected. We contacted the route to understand why. They confirmed that the figure they published was an error (typo) and agreed to amend at a later iteration in line with our advised figure.
    c. **Wessex** – Published a figure lower than we had advised. We contacted the route to challenge. Wessex took the deliberate decision to revise down their figure – stating risks of new rolling stock for SWR and passenger growth on the Southampton corridor. FNPO did not agree this change.

11. In the coming periods we will commence the annual scorecard setting round for 2019/20. The issue of the Wessex target will be resolved as part of that process. We will also confirm the LNE target has been changed back to meet our expectations.

LNE & EM response to ORR's Draft Determination

31 August 2018

Contents

Prepared by: Gavin Peace – LNE & EM Programme Director (Asset Management transformation)

Approved by: Andrew Murray – LNE & EM Director of Route Asset Management

A.W Murray

Executive Summary

Key areas for consideration:

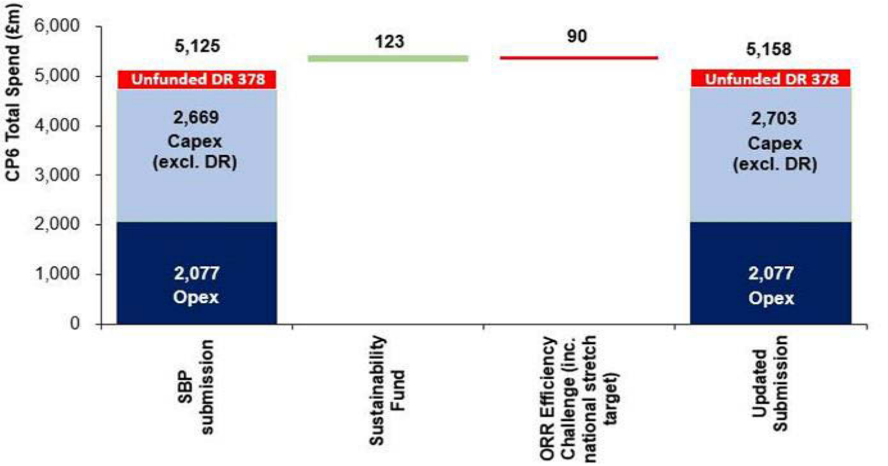
- LNE & EM has gone a long way to address the points raised in the Draft Determination (DD) and propose that the ORR adopt our updated plan in its Final Determination.
- Significant additional efficiency (including an additional 'stretch' target set by the Centre) has been built into our plan, as requested in the DD. This has proved a difficult exercise given the extensive work already undertaken and included in our SBP, this has therefore added significant risk to our plan.
- The CP6 performance trajectory entry points defined in our Strategic Business Plan (SBP) are now unattainable due to performance impact of the May timetable implementation. We would like the ORR to support the introduction of an annual review and change control process to allow ongoing development of the underlying performance assumptions and trajectories with our customers through the control period and thus also promote closer collaboration between the Route and operators.
- To help further the Route's stated desire to improve the East Coast Main Line (ECML) infrastructure, we would like the ORR to support the introduction of controlled change mechanisms to enable plans to be developed and integrated as funding opportunities arise during the control period.
- Our plan is predicated on the rollout of Digital Railway (DR). If DR is not progressed, this plan will require amendment to enable urgently required conventional renewals to life expired signalling assets to proceed. The Route would therefore require support from the ORR to enable it to enact this change without negative impact on its scorecard metrics.
- We support the allocation of additional Route held GPF, as defined in DD, and for this to be controlled and managed by the routes through appropriate governance process. This will enable identified risks to be effectively managed and mitigated such that any released funds are allocated to contingent renewals in a timely manner, best enabling effective delivery of works.

LNE & EM Route team has reflected on the CP6 Draft Determination (DD) and this document forms our formal response to it, containing the Route's views across a range of policy areas and setting out where we are continuing to develop our plans to provide a greater level of detail and clarity, or have alternative solutions to those suggested in the DD.

In addition to the points set out in the key areas for consideration section, we acknowledge the addition of the sustainability funding to which we have applied a systematic approach to best deliver the requested outcomes. We note that achieving the desired level of sustainability funding is linked to the need to further improve on the efficiency plans across the Routes. The Route also notes the continued drive to devolution and the allocation of a greater proportion of the Group Portfolio Fund (GPF) to the Routes.

Our revised CP6 funding position, after taking account of changes made by the Centre, is shown below.

Figure 1: LNE & EM revised CP6 funding *including unfunded DR*.



The chart above reflects the changes to our SBP renewals (capex) and opex funding for CP6. Our total submission (**£5,125m**) included **£2,669m** in renewals. The figure of £378m relates to the currently unfunded element of Digital Railway. After adjusting this to reflect both the revised Sustainability (**+£123m**) and Efficiency (**-£90m**) Challenges, our renewals funding increases by **c£33m** to **£2,703m**.

There have not been any changes to our SBP with regard to opex funding.

Asset sustainability

Out of the total circa £1 billion in additional sustainability funding requested by the ORR, LNE & EM's initial 'base' sustainability submission totalled **£225m.** This was subsequently reduced to £608m to reflect the national position on headwinds and efficiencies (see below). As a result, LNE & EM was ultimately allocated **£123m** out of this revised target, which is £102m lower than our original base submission. This revised target means that we are now only able to fund the top six packages from the base submission (which contained 16 packages of interventions across track, earthworks, structures, buildings, signalling, and electrical and fixed plant (E&FP) asset groups).

Out of our revised target, a significant proportion has still been allocated to track as monetary constraints in our base plan had reduced renewals to the following critical assets:

- S&C renewal volumes in our SBP were approximately half that of CP5. Our base sustainability submission therefore contains an additional 35 S&C units on the highest criticality routes.
- LNE has over 1,000km of pre-1976 rail. Our SBP only contained 300km of re-railing works. Our base sustainability submission provides an additional circa 90km of re-railing to further address this.

Our initial base submission was considered by the Safety, Technical and Engineering (STE) team to provide the highest improvement to sustainability across England and Wales (E&W) relative to other Routes, increasing England and Wales CSI by 0.184%, contributing over 30% to the national improvement total. Our revised position, which is comprised of our top six packages of work, is responsible for delivering over 65% of the benefits in our initial submission, and provides an **E&W CSI improvement of 0.121%.**

In addition to our sustainability submission, LNE & EM has also developed a currently unfunded £742m improvement programme for the ECML (the 'ECML Supplementary Plan'). The ECML is a vital part of the UK's rail network, connecting communities from northern Scotland to London and in between. Together these communities generate more than £300 billion in GVA to UK plc each year (excluding London)[1].

Should additional investment for renewals works (over and above that contained in our SBP and sustainability submission) become available, the Route intends to enact the ECML Supplementary Plan either wholly or in part, depending on funding. Implementation of this plan will improve reliability and deliver some of the performance improvements on the ECML desired by our customers (PPM would improve by 1.8% for LNER and 0.9% for GTR if this plan was implemented in full).

Headwinds and Efficiencies (H&E) challenge

LNE & EM has submitted updated H&E profiles in response to the ORR's H&E Challenge. The main changes from our SBP are as follows:

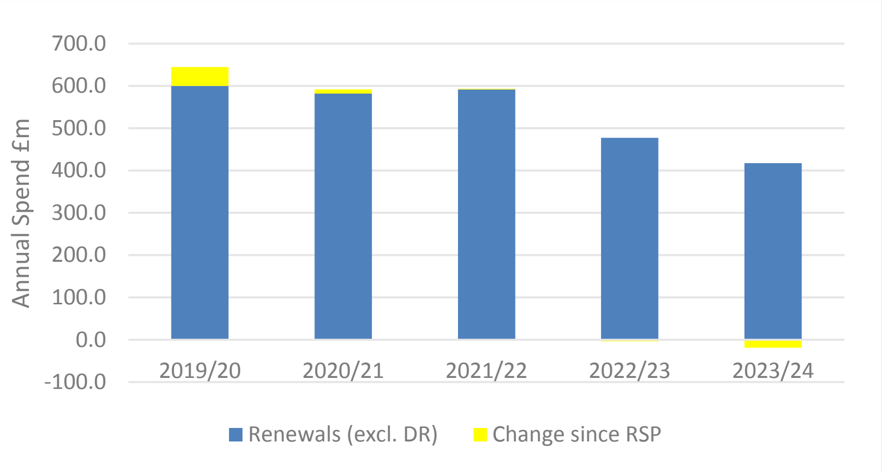
- **Renewals:** includes an **additional £90m of efficiencies (incl. an additional £9m efficiency overlay to meet to national 'stretch' target)** reflecting the Route's proposal to meet its share of the £491m being proposed nationally in response to the H&E Challenge. It is noted that the additional 'stretch' target has not been worked up by LNE & EM in any detail and therefore introduces additional risk to our plan.
- **Opex:** reclassification of the Civil Assessments Framework Agreements (CAFA) headwind to a scope change.
- **Opex:** we have moved Holiday Pay and Apprenticeship Levy from the base plan to separate costs lines in the headwinds section.
- In addition, the underlying work banks have been re-profiled to reflect the continual development which has taken place since RF11.

Re-profile / deliverability

Our updated renewals workbank profile after both the Sustainability and Efficiency Challenges, and continued development of the underlying work banks is summarised in Figure 2 below.

[1] Source: Consortium of East Coast Main Line Authorities, 2016

Figure 2: Updated LNE & EM CP6 renewals workbank (total revised renewals (excl. unfunded element of Digital Railway): £2,703m)



Group Portfolio Fund (GPF)

We welcome that ORR's draft determination accepted the total value of funding for CP6 financial risk (the 'Group Portfolio Fund') of £2.6bn. We also note ORR's proposed changes to the governance of this funding. We have worked with Group Finance to develop revised governance arrangements for the three categories of risk funding, which reflect ORR's draft decisions. As most of the risk funding will be held in Routes, we will now be responsible for managing all financial risk in our Route plans, except those that are truly exceptional. We are continuing to work with Group Finance to agree the detailed arrangements associated with the budgeting for, and use of, the Group Portfolio Fund in CP6.

We further intend to use the Route-level risk funding to mitigate the additional risk imported into our plan by the sustainability and efficiency challenges referred to elsewhere in this document.

Research and Development (R&D) challenge

We note the ORR's comments about Network Rail's funding allocation for R&D of £440m. We do not however agree with the ORR's reduction of funding from £440m to c£100m, as this does not adequately reflect the nature and scale of our business. It is acknowledged however that the updated R&D plan must align more closely with the needs of the Routes and have much closer links to, and engagement with, the Routes.

To address some of the ORR's concerns, Network Rail has revised its R&D programme into a set of more specific and detailed work packages that are better aligned to each of the Routes. The revised R&D submission now amounts to £350m in total. Of this, we note that Network Rail is in discussions with third parties with the aim of achieving £105m (of the £350m) in matched funding. Therefore, Network Rail's revised submission for R&D is c£245m, representing a reduction of c£200m from the SBP.

Safety expenditure

The DD sets out nationally that Routes should include an additional **£80m** of safety related expenditure in their CP6 plans. Of this, Network Rail has set out that approximately £25m should be allocated to improved protection of user worked crossings (UWCs) through the installation of miniature stop lights (MSLs) nationally.

LNE & EM will receive approximately **21% (£5.22m)** of this £25m allocation, reflecting that we have over 25% of UWCs nationally on our Route[2], as well as our current high levels of installation efficiency (approximately 1/3 of the cost per crossing installation, compared to certain other routes) for these improvements. We also note that we have previously identified a significant but unfunded package of Level Crossing upgrades in Appendix D of our SBP[3].

[2] LNE & EM has a total of 1,853 level crossings across the Route, representing around 29% of all level crossings across England. 584 of these level crossings are user worked crossings.

[3] Appendix D of our SBP sets out £66m of level crossing safety improvements

Performance and stakeholder engagement

We have continued to engage with our customers regarding our performance trajectories. Despite this, there remains a likelihood that we will only reach agreement on certain elements of the projections for CP6. One area which is subject to further discussion is the CP6 entry point, especially given current performance levels, meaning that some of these now appear unattainable.

The Route is firmly of the view that the introduction of a change mechanism would be our preferred approach to agree, manage and maintain our key plan assumptions and scorecards with our customers on an annual basis, especially given the uncertainties relating to the impact and timing of enhancements, timetable changes, franchisee obligations and fleet programmes planned across the Route in CP6.

Mobilisation and readiness

To ensure we are ready to deliver on our commitments for CP6, we have developed a mobilisation programme, which includes:

- Setting up a Program Management Office (PMO) and level 1 program management control room;
- Implementing an appropriate governance structure to support CP6;
- Identifying and monitoring key leading indicators to track the Route's progress towards CP6 delivery; and
- Directly linking the Mobilisation programme with the Route's Asset Management Transformation programme to ensure cross-fertilisation of ideas and facilitate long term solutions to issues identified.

The aim of this programme is to ensure that the Route can monitor, identify and act upon any emerging issues or changes that need to be made in order to ensure it is best placed to enact its CP6 delivery plans from the beginning of the new control period and then to build lessons learned into its long term Asset Management transformation programme.

The Route is also in the process of developing a full programme control room structure, linked to existing forums where possible, which will be used to track the progress of our preparation for CP6. The aim of this is to provide a visual representation of how the Route is tracking towards the achievement of our key CP6 milestones, highlighting and pre-empting any key risks or issues that may interfere with our ability to deliver on our commitments.

Network Rail has implemented and is continuing to develop a leading indicator report for CP6, which will include annualised trajectories for our leading indicators, to ensure we can monitor our progress against a clearly defined plan of delivery. The Route is supportive of this process and has built it in to its mobilisation programme.

Detailed response

1. Overview

This document provides our detailed response to the ORR's Draft Determination (DD). Our response is split into the following sections:

2) **Asset sustainability:** a summary of our sustainability submission, and a summary of the related next steps.
3) **Headwinds and efficiencies (H&E) Challenge**: a summary of our financial submission and our view of how we will contribute to meeting the ORR's H&E Challenge and Network Rail's allocation of the H&E challenge to each of the Routes.
4) **Re-profile / deliverability:** a summary of our financial submission including an update on the changes to our CP6 expenditure and volume profiles in response to the DD and other developments since our SBP submission.
5) **Group Portfolio Fund (GPF):** a summary of our assumptions for the GPF, specifically allocation and governance procedures.
6) **Research and Development (R&D) Challenge:** Our views on your DD and impact on potential sustainability funding.
7) **Safety expenditure:** setting out our assumptions around how this is allocated across the Routes.
8) **Performance and stakeholder engagement:** an update on our stakeholder engagement process as well as setting out how we plan to update our CP6 performance projections, and our plans for involving customers and stakeholders in the development of our plans going forward.
9) **Mobilisation and CP6 readiness:** setting out our plans to prepare for delivery in CP6.

Our revised CP6 funding position is provided in the following charts. This shows the position in our SBP, the key changes, and the revised position.

Figure 3: LNE & EM revised CP6 funding *including unfunded DR*.

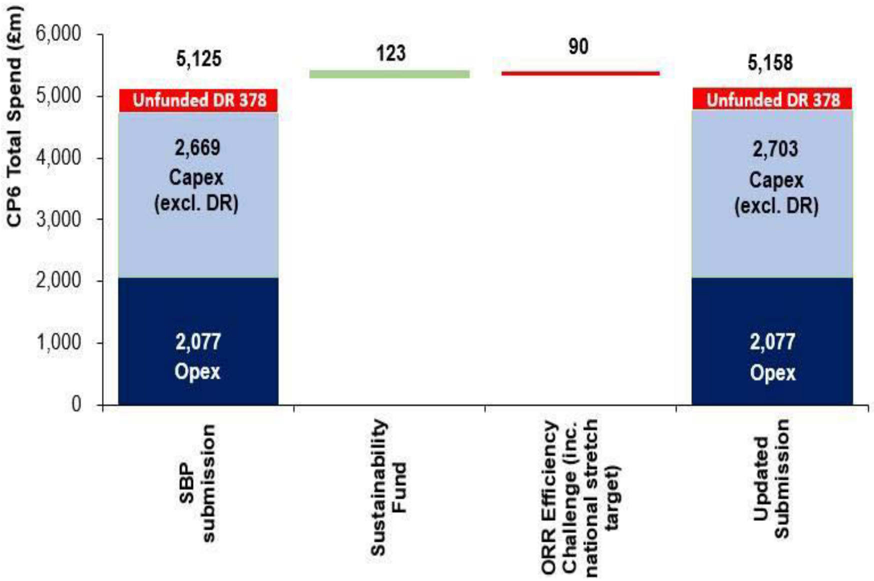


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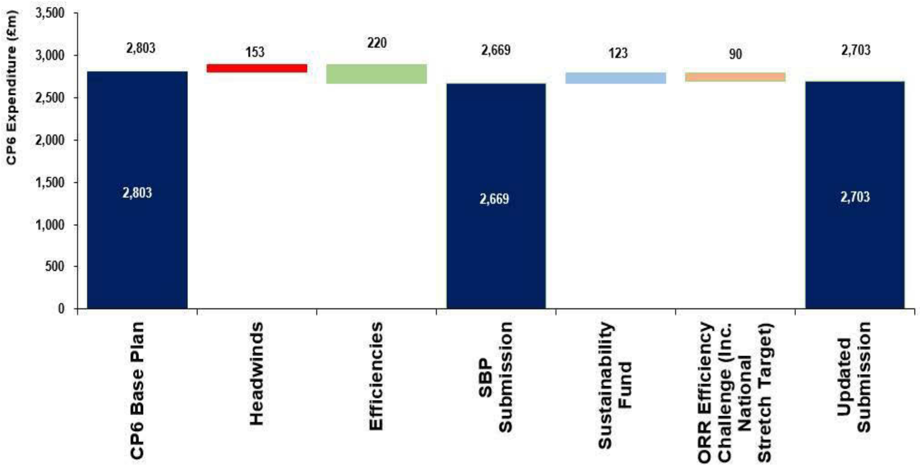
Figure 4: LNE & EM revised CP6 renewals funding



There have not been any changes to our overall opex budget which consists of **£2,077m** operational and maintenance expenditure, and **£685m** income.

2. Asset sustainability

2.1 Introduction:

We acknowledge the ORR's focus on the area of sustainability as set out in the DD, and recognise the importance of maintaining a sustainable asset base. On this basis we note that additional expenditure in this area is required on top of our SBP to improve asset sustainability throughout CP6, which is in addition to the 25% increase in operations, maintenance and renewals (OMR) funding which has been allocated to the Routes in CP6 compared to CP5.[4]

As set out in the DD, the ORR stated that an additional circa £1bn in projects should be submitted across the Routes to improve asset sustainability. Network Rail's Business Review Team (BRT) undertook an initial allocation of this £1bn across the Routes, which included an allocation of £225m to LNE & EM. Network Rail Centre has subsequently undertaken an exercise to review the overall position across the Routes and has proposed a national total of £608m in response to the initial £1bn target. LNE & EM has been allocated **£123m** out of this revised target, £102m lower than our original submission.

The development of our response has been an iterative process, which has included feedback from STE who carried out an exercise to quantify the sustainability benefits (in terms of CSI) of our submission (see section 2.3, below). Our final submission reflects our systematic approach undertaken, which included significant input from our RAMs and SPOCs as well as the various reviews which were undertaken by STE described above.

2.2 Summary of projects in LNE & EM sustainability submission:

Our submission identifies a number of packages (grouped into either our '*base submission*' or our '*supplementary submission*') that most effectively address the ORR objective of improving asset sustainability. These packages of work also have a number of associated safety, performance and reputational benefits. In addition to these two submissions, we have also set out a package of targeted ECML interventions which focus on delivering the performance improvements expected by our customers:

- **'Base' sustainability submission (£123m)[5]:** highest priority packages that can be delivered within our initial funding allocation.
- **'Supplementary' sustainability submission (£469m):** an additional but unfunded **£345m over our base submission** which would, if funded provide further material benefits to the sustainability of our asset base; and
- **ECML Supplementary Plan (Package 2) (£742m): Currently unfunded -** targeted renewals on the ECML (over and above our 'base' and 'supplementary' submissions), designed to drive performance improvements to the level expected of us by our ECML customers. Many of these renewals would also provide sustainability improvements across the ECML. This is currently unfunded.

It is noted that our initial 'base' sustainability submission which totalled

[4] https://www.networkrail.co.uk/feeds/network-rail-reveals-significant-investment-more-services-and-fewer-delays-in-its-five-year-plan/

[5] Note: all costs stated for our sustainability submission are post headwinds and efficiencies (H&E)

£225m, has been reduced by £102m, following the adjustments made to the Route allocations resulting from a national review.

A summary of the projects contained within our submission, as well as the split of funding between each asset group, is provided in figure 5 below.

Figure 5 LNE & EM sustainability submission (£m)

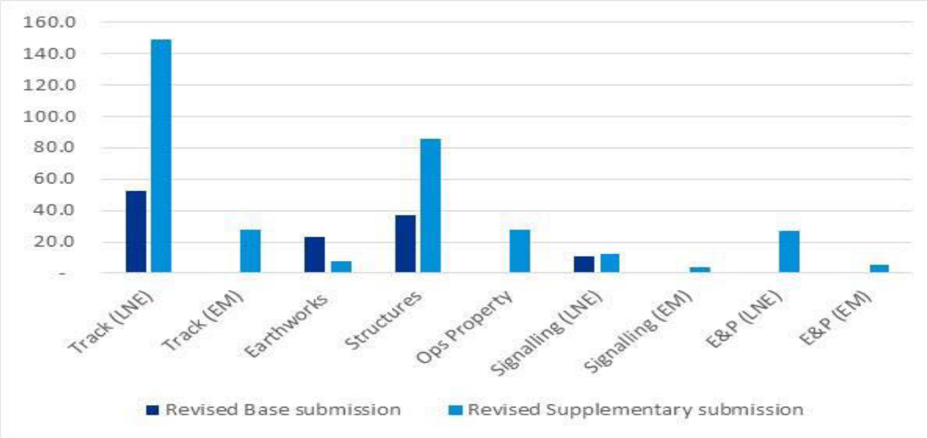


Table 1: Summary of LNE & EM's revised base submission

Asset group	High-level overview of packages	Total funding (£m)
Track	• Majority of works are S&C and re-railing, with a focus on replacing life expired assets on ECML • Targeted where base submission renewals volumes are significantly below STE/BRT modelled volumes	53
Earthworks	• 82 schemes in total incl. a mix of renewal, refurb and "light refurb" on embankments, rock and soil cuttings	23
Structures	• Highest priority schemes target increasing scope and sustainability of baseline CP6 renewals where 'lowest initial cost' approach was adopted in light of funding constraints	37
Signalling	• Renewal of critical control system at Tyneside IECC	10
Total		**£123m**

As shown in table 1 above, one of our key priorities was track (c£53m in our revised base submission). The main reason for this is due to the funding constraints that were applied to our SBP. Most of our track sustainability funding has been allocated to re-railing and S&C renewals due to the criticality of these assets. For example:

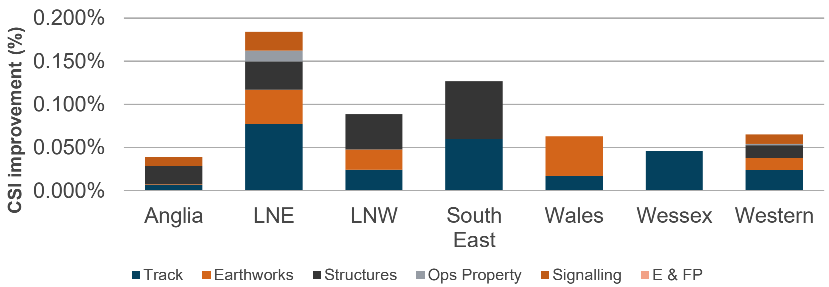
- S&C renewal volumes in our SBP were significantly lower than in CP5 (180 units compared to 364 units at CP5). Our base sustainability submission therefore contains funding to undertake an additional 35 S&C units on the highest criticality routes.
- LNE has over 1,000 track km of pre-1976 rail. Our SBP only contained 300km of re-railing works. Our base sustainability submission has provided an additional circa 90km of re-railing in CP6.

As noted above, these costs are post-H&E, and are consistent with the Route's latest position on headwinds and efficiencies, as set out in our financial submission.

2.3 Summary of CSI benefits

Building on above, we felt that it was important to also provide a summary of STE's analysis of the sustainability improvements provided by our initial 'Base' and 'Supplementary' submissions, to help articulate the benefits that this additional funding might provide in terms of the sustainability of our assets. Our analysis of STE's outputs on the initial submissions across the Routes is provided in figure 6 below.

Figure 6: Route sustainability benefits (initial 'base' plans)



Note: sustainability benefits of our 'supplementary' submission are broadly similar to our base submission.

Some emerging themes/conclusions from figure 6 above are that:

- Our initial base submission had a **positive impact on E&W CSI** (0.184%), **contributing over 30% to the national improvement. Our revised base submission (reflecting adjustments made by the Centre) provides an E&W CSI improvement of 0.121%;**
- Our initial base submission also delivers a **high E&W CSI improvement relative to the level of investment**.
- Our initial base submission for **track** was estimated to provide the **highest contribution to CSI improvement in E&W** out of all asset packages across the Routes (0.077%). Our revised base submission for track provides E&W CSI benefits of **0.033%**;
- Our initial base plan submissions for **earthworks** and **structures** were also considered by STE to be 'high impact' CSI schemes, falling within the '**top 10' performing asset groups** in terms of their ability to improve CSI across E&W (0.04% and 0.032% respectively).

In addition, our initial 'supplementary' submission had the following benefits:

- **High impact on E&W CSI** (0.197%), contributing over **44%** to the national improvement in CSI;
- Delivers broadly the same CSI improvement per £10m of investment as our base plan submission: the **largest overall contribution to E&W CSI** and the **3rd highest** level of CSI improvement per £10m of investment across both the 'Base' and 'Supplementary' submissions.

2.4 Deliverability / Phasing of sustainability submissions:

In developing our sustainability submission we have carefully considered the delivery profile of the works alongside our wider CP6 submission and enhancements programme. The approach we have adopted is:

- A number of schemes represent scope changes to baseline schemes that had previously been de-scoped to meet affordability constraints. These projects are typically further developed than 'new' schemes;
- We have typically allocated funding towards the second half of CP6 (i.e. in years 3-5). This will allow us more time to develop, plan and schedule works alongside our existing workbanks.

As part of our overall DD response we have also undertaken an exercise to test the overall financial deliverability and phasing of our revised plan, which included a review of phasing for the packages contained within our sustainability submission.

We also acknowledge that our individual packages of work are subject to ongoing deliverability assessments to ensure that the schemes ultimately selected for inclusion in our workbank have sufficient allowances for access, resource etc.

2.5 ECML Supplementary Plan:

In addition to the sustainability submission outlined above, LNE & EM has also developed a currently unfunded £742m programme of targeted renewals along the ECML (the 'ECML Supplementary Plan'). The ECML is a vital part of the UK's rail network, connecting communities from northern Scotland to London and in between. Together these communities **generate more than £300 billion in GVA for UK** each year (excluding London)[6].

In recent years, the ECML has experienced high growth, and in the last 10 years this growth has outstripped that of the UK rail network as a whole, with the number of passengers using the ECML increasing around 80% to circa 90 million each year. This is expected to grow to around 105 million by 2023 and 130 million by 2043. In addition, on the busiest sections of the ECML, it is forecast that passenger services will increase by 45% from around 28tph currently, to around 41tph in 2021. Despite the ECML's strategic importance, the majority of the asset base on the line has not been renewed since the late 1980s.

In light of the above, it is widely acknowledged that **significant investment is required** to improve ECML capacity, connectivity, reliability and reliance, both before and after HS2 is introduced into service.

An economic study commissioned by the Consortium of East Coast Mainline

[6] Source: Consortium of East Coast Main Line Authorities, 2016

Authorities (ECMA) in 2016, revealed that investing in the ECML would maximise the potential benefits that HS2 can bring to the route, and would have economic benefits (measured in GDP) worth up to £9 billion. Furthermore, this study found that investment which realised an additional eight long-distance high speed train paths out of London, and nine north of Peterborough, could be expected generate over £0.3bn of additional GDP per year.

In order to deliver the performance improvements on the ECML as desired by our customers, additional investment in renewals works over and above that which is contained within our SBP (and in addition to our sustainability submission) is required. The Route has identified a package of additional investment on the ECML of up £1.5bn. Of this, we have identified two priority packages of work totalling £742 million which include:

- Track renewals from Kings Cross to Newcastle (**£198m**);
- Lineside fencing works Kings Cross to Border (**£45m**);
- Bridge strike prevention and signalling power supplies works from Kings Cross to York (**£222m**);
- Level Crossing closures from Kings Cross to Peterborough (**£92m**); and
- Overhead line works between Peterborough and Doncaster (**£185m**).

These packages of investment are expected to drive a wide range of benefits across the Route including performance, safety and reliability. We would look to carry out these works should additional funding arise through CP6.

3. Headwinds and efficiencies (H&E) challenge

3.1 Overview of our updated H&E submission

As part of our DD response we have submitted updated H&E profiles. When compared to our SBP, our position has changed to reflect the following:

1. **Civil Assessments Framework Agreements (CAFA) headwind to Scope Change:** Our Civil Examination Framework Agreements (CEFA) headwind was originally £24.7m. This included CEFA (£12.2m) and CAFA (£12.5m). Following a reassessment, the CAFA element has now been determined to be a scope change as the cost increase is the result of increases in shift volume. As such, the £12.5m CAFA cost has been reclassified from a headwind to a scope change as part of the finance submission.
2. **Holiday Pay and Apprenticeship Levy**: these were included in the SBP however they were included as base cost rather than headwinds. Therefore as part of our finance submission, we have taken these additional costs out of our base plan and shown these as separate costs lines in the headwinds section. There was no net impact on post-H&E opex costs.

Our response to the ORR's Efficiency Challenge is summarised below.

3.2 LNE's response to the H&E challenge

ORR has determined that an additional 2% (£586m) Efficiency Challenge can be placed on Network Rail in E&W.

As described in our SBP submission (sections 7.6 and 7.7), our CP6 H&E plan is based upon (a) detailed baselining of all of our unit rates to ensure that our CP6 starting position is robust; and (b) a systematic approach to identifying and quantifying likely headwinds that may materialise during CP6, and the efficiencies we expect to deliver.

As a result of these measures, our analysis shows that we are already proposing to deliver renewals throughout CP6 at efficient unit rates that are amongst the lowest of all Routes.

Despite this, in response to the further efficiency challenge we have undertaken a strategic review of potential further efficiencies that the Route and its deliverers will be able to deliver during CP6.

We note that these strategic efficiencies have been developed in a short period of time, and are therefore not as well developed as our efficiencies set out in the base SBP submission which were identified and worked up in detail following a systematic process. There is therefore a higher degree of uncertainty which should be applied to the estimation and delivery of these further efficiencies outlined below.

Our strategic review has identified an additional **£80.8m** in efficiency savings which we plan to achieve in CP6. Our rationale for these additional savings is as follows:

- **Contingency Management – c£31.8m:** Implementing additional change control and governance processes to ensure more efficient use of contingency budgets within our renewals programme during CP6 and separating out sponsor and project manager contingency. This will place more emphasis on the appropriate and efficient use of contingency funding where legitimate requirements for it to be drawn upon have been identified. We have estimated the saving based on an analysis of average CP5 contingency levels which are in the range of 4-6%, depending on the type of project. We have quantified our proposed efficiency by assuming that these measures will reduce the level of contingency held by 1% of project value.
- **Delivery Optimisation – c£15m:** We are currently reviewing further opportunities to deliver additional efficiency through optimising our delivery strategy in order to ensure that our plan consistently makes use of the most competitive rates and the most effective delivery mechanisms. The estimated efficiency is based on better use of improved asset knowledge to optimise planning of our work banks with our deliverers.
- **SCO scope efficiencies - £6.1m:** We are examining the potential to work with SCO to develop more efficiencies through early sight of our long term workbanks, allowing them to optimise the delivery model. We are also re-examining our SBP to consider whether there are additional SCO scope efficiencies that could be included in our base plan. The estimated saving is based on efficiencies put forward by SCO, incremental to those already included in the plan from deliverers. It also includes strategies such as rail logistics, High Output commercialisation (OTM), and operations planning.
- **Other initiatives, including over-plan scope change (£27.9m)** - Finally, given the level of change within the organisation and the limited time we have had to respond we would propose to allocate the remaining element of the efficiency challenge to other, as yet unidentified initiatives, the main focus of which will be an additional over plan. During the Control Period, reviews of our asset sustainability position and reprioritisation of the workbank will be taking place and we will need to align available funding and also manage this alongside the release of Group Portfolio Funding for contingent schemes.

The Route has applied a structured process to baseline existing efficiencies and to identify new ones. Given this process we have undertaken and the emerging estimation of the potential efficiencies we consider the items set out above are sufficiently robust to put forward at this stage. However, it must be noted that given the relative maturity of the development of these efficiencies there is significant additional uncertainty over the quantification and final delivery. Therefore whilst we will continue to develop these efficiencies into our delivery plan for CP6, there is a significant risk to our control period plan of failing to deliver these. To mitigate this risk, we would seek to cover any shortfall through the group Portfolio Risk, should the efficiencies not prove deliverable in full.

In addition to the above, we have subsequently been allocated **additional £9m efficiency overlay to meet to national ‘stretch’ target** to meet the £491m being proposed nationally in response to the H&E Challenge. This means our revised efficiency target is £90m. It is noted that the overlaid £9m has not been worked up in any detail by the Route and therefore introduces additional risk to our plan.

4. Re-profile / deliverability

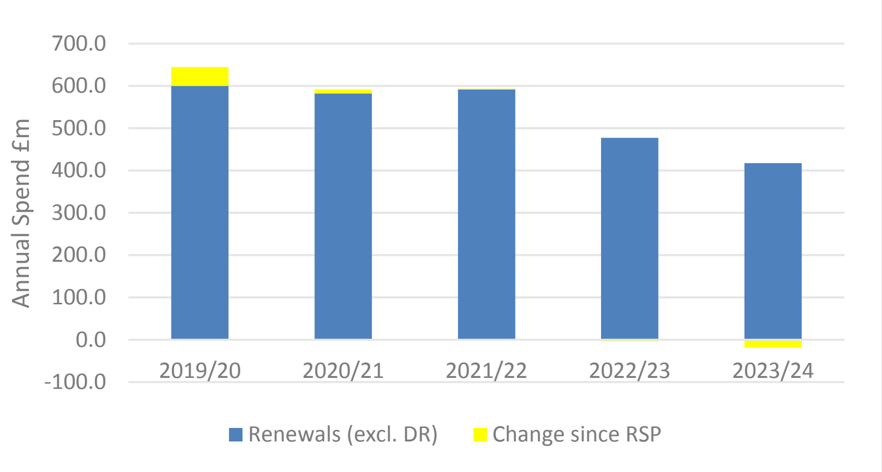
We have recently undertaken a review of the profile of our CP6 expenditure and volumes in light of developments since our SBP and to ensure compliance with the changes to accounting rules that will be implemented in CP6. This was part of a wider review of our overall financial submission to ensure its robustness prior to the start of CP6.

The key factors that have influenced the profile of our revised submission include:

- Timing of significant enhancement schemes where there are linked renewals schemes, including King’s Cross re-development and the Huntingdon to Woodwalton four-track re-instatement
- Changes to funding related to the various elements of the DD, including sustainability, the H&E challenge, Group Portfolio Fund and any additional funding allocation related to Safety.

A summary of the revised position, (with the changes compared to the SBP position) is provided in Figure 7 below.

Figure 7: Updated LNE & EM CP6 renewals workbank (total revised renewals (excl. unfunded element of DR): £2,703m)



The key areas driving the change from the SBP as shown in figure 7 above (in yellow) are as follows:

- **Renewals:** Re-phasing of the underlying workbanks submitted in the SBP has been performed to reflect:
  - emerging changes from further workbank development. The main impact in this area has been a re-phasing of our efficiencies to allow increasing maturity of them through the control period as part of our deliverability review, which has resulted in movement of some expenditure from years 4 & 5 to years 1 & 2 to provide for efficiency development;
  - the inclusion of **additional £123m,** which represents our revised sustainability funding target; and
  - the route's response to the ORR's Efficiency Challenge (**£90m, which includes an additional £9m efficiency overlay 'stretch' target set to us following a national review)**. When this is applied to the additional £123m sustainability funding, this leads to the net additional **£33m**.
- **Risk fund:** The risk fund has been re-phased to match the routes uncertainty profile during the control period to try to mirror where risks are most likely materialise.

In addition to the above, we have also stepped up our mobilisation activities for CP6, with a ramp up in the resourcing of our PMO function and establishing activities to measure, track and report on our readiness to deliver our CP6 commitments. This is described in more detail in Section 9.

5. Research and Development (R&D) challenge

Please refer to commentary provided in our Executive summary on page 5, above.

6. Group Portfolio Fund (GPF)

Further to our executive summary comments, we note the increased drive to devolution which is evidenced through the ORR's decision to reallocate half of the remaining centrally held GPF to the routes. We would expect this to equate to circa £199m to LNE & EM if split on a pro rata basis (final allocation to be formally agreed) which we will hold as Route Contingent funding. This is in addition to the £132m Route-level Risk Fund, which was previously allocated to the Route.

We intend to hold both the Route-level Risk Fund and Route Contingent funding as opex due to the increased level of flexibility with opex funding over capital funding, as provided in the latest accounting classification of the GPF. This means that, if required, we will have more flexibility to transfer funding from opex to renewals, which may lead to a reduction in delays to critical renewal works and potentially also avoid additional resource spending which may have otherwise been required to maintain life-expiring assets before they could be renewed.

We also intend to use the Route-level risk funding to mitigate the additional risk imported into our plan by the sustainability and efficiency challenges referred to elsewhere in this document.

7. Safety expenditure

Please refer to commentary provided in our Executive summary on page 5, above.

8. Performance and stakeholder engagement

Whilst the DD did not contain any specific concerns in relation to our performance trajectories, there are a number of areas identified in the DD that are required to be addressed in the next iteration of our CP6 plan. An overview of our recent engagement with our customers and other key stakeholders is set out below, as well as our emerging response to this.

Table 2: Overview of our emerging response to the ORR's DD across Performance and Stakeholder Engagement

Overview of ORR's DD	LNE/EM Emerging Response
<u>**CP6 Performance targets:**</u> • The DD provides an additional opportunity for LNE/EM to **agree suitable performance targets for CP6** with VTEC (LNER), Northern, East Midlands Trains, Hull Trains and Grand Central. This should also reflect any targeted adjustments (i.e. sustainability) being requested as part of the DD. • Need to demonstrate that the Route is **continuing to engage meaningfully** with its stakeholders to undertake a targeted update to its business plan, **ensuring that operators have an opportunity to comment** on any proposed updates to the plan • Stagecoach (representing **EMT** and **LNER**) has raised a concern that the performance targets represent a worsening of PPM. • **Grand Central** has raised a concern that it has not had meaningful engagement with the route team to understand the methodology used to derive the performance trajectories.	Engagement with our customers about performance targets is ongoing. We note that customers are currently being advised that we must consider current performance levels in order to avoid a step change from the CP5 exit to the current CP6 year 1 target as outlined in the SBP. An overview of recent and ongoing consultations as well as key decisions / outcomes reached is provided below: • **LNER:** Performance has been a standing agenda item at the 4-weekly alliance board. LNER believe that TOC on Self Fleet and OLE improvements are likely to have a more positive impact on performance. Work is ongoing within LNE & EM to understand the impacts of these interventions on performance in more detail. • **Northern:** It has been agreed that the 18/19 year end position (89% in the SBP) is no longer achievable due to the recent timetable difficulties and other factors including extreme weather events. Joint discussions are ongoing to understand the true baseline performance that can be delivered outside of these events. • **EMT:** Senior management discussions with EMT have been ongoing since the SBP submission. The current focus of these discussions is on the latter years of CP6. EMT's position is that enhancements are likely to lead to improvements in PPM. LNE & EM's current assumption (as noted in our SBP) is that the performance impact from enhancements will be net neutral alongside the capacity benefits of the upgrade. • **Grand Central (GC):** Discussions on our trajectories are ongoing. We are working together with the aim of reaching agreement in the coming weeks. • **Hull Trains:** Hull Trains has stated that they have not had sufficient engagement on the CP6 performance trajectories to date. Hull Trains has also suggested that TOC on TOC delay and TOC on own fleet should have a more positive impact and that the CP6 exit number should be higher. Further engagement is planned through level 1 meetings with senior management to understand the effects of these interventions on performance. Despite our ongoing engagement, there remains a likelihood that we will only reach agreement on certain elements of the projections for CP6. One area in particular which is subject to ongoing discussion is the CP6 entry point, especially given current performance levels. We note that all our customers have been advised that CP6 entry point and CRM-P trajectories can be altered by joint agreement provided both parties are satisfied with the evidence for the change. Constructive use of this change mechanism is our preferred approach given uncertainties relating to impact and timing of enhancements, timetable changes and fleet programmes in CP6. The Route acknowledges that this approach is already in development with the ORR as part of a national change management framework. It is noted that we have not had sufficient time to update our performance trajectories for the projects contained within our sustainability submission. We will plan to update our trajectories once any additional funding is confirmed and have had sufficient time to discuss the impact of this with our customers.

<table>
<tr><th>Overview of ORR's DD</th><th>LNE/EM Emerging Response</th></tr>
<tr><td><u>Stakeholder engagement process:</u>
Stakeholder engagement could have been more inclusive to ensure all relevant stakeholders had an opportunity to provide input eg. freight users / external suppliers;
That the Route could have set out a clearer strategy for gathering stakeholder views, as some felt that the process did not allow them the opportunity to influence the Plan;
That our Plan could have provided more detail about our understanding and approach to meeting various stakeholder priorities as well as how any trade offs were made.</td><td>In addition to the performance oriented meetings and workshops discussed above, the Route is continuing to engage with all of our key customers and stakeholders about the overall development of our plan. A summary of some of these key meetings held recently or which are currently planned include:
GTR: a meeting was held with our CP6 team in May to provide an overview and update on our CP6 Plan with a focus on key commitments related to GTR.
Northern/LNW: a Northern Alliance Board meeting was held in July between our CP6 and performance leads and key representatives from both the Northern and LNW routes. This provided an opportunity for a more strategic and coordinated approach, allowing the route to provide an update to our CP6 planning process, updates to performance (see above) as well as an overview of the broader CP6 readiness and asset management workstreams which are currently being developed. The next Alliance Board meeting is in August.
Grand Central: a meeting between our CP6 lead and the Grand Central MD has been scheduled and will allow the Route to provide an update on our CP6 process focussing on key areas likely to impact Grand Central.
West Yorkshire Combined Authority (WYCA): We have been consulting with WYCA on our planned renewal works on the ECML in CP6.
The Route is continuing to develop its strategy for engaging and acting upon feedback from with all relevant stakeholders (incl. freight end users and external suppliers) as we finalise our plans for CP6. Wider CP6 stakeholder sessions are being planned for late-August.</td></tr>
<tr><td><u>Definition of performance measures:</u>
Network Rail and Routes to adopt and publish clear and consistent definitions for scorecard measures. Those relevant to LNE/EM: Network Rail caused delay minutes by the route; On-Time at all recorded stations; and Level of Cancellations.</td><td>LNE& & EM would be supportive of an approach to publish a quarterly scorecard report to improve the transparency and governance of scorecard measure definitions.
It is worth noting that not all routes have the same metrics on their scorecards.
There are still a number of unknowns around what will impact CRM-P compared to current measures (e.g. PPM). To improve understanding of this measure across all routes, the route would like to see LNE & EM will provide a clearer definition of the specific measures in the next submission of its CP6 plan and scorecard.</td></tr>
<tr><td><u>Inclusion of other operators in our scorecard:</u>
CrossCountry concerned that they are not included on our scorecard. LNE/EM to set out how it proposes to engage with CrossCountry and include them in their scorecards.
Nexus has also raised similar concerns to CrossCountry</td><td>LNE & EM will include Cross Country and Nexus on the scorecard and engagement to do so has already begun.
For CrossCountry, it has been agreed at Head of Performance level to use the current 18/19 customer scorecard Right Time Metrics on the long range scorecard.
For Nexus, we will seek agreement to use the 18/19 scorecard metrics on the long range scorecard</td></tr>
</table>

9. Mobilisation and CP6 readiness

Please refer to commentary provided in our Executive summary on page 5 & 6, above.

LNW Route

response to ORR's Draft Determination

31 August 2018

LONDON NORTH WESTERN
BACKBONE OF BRITAIN

Contents

Executive Summary

LNW Route acknowledges and welcomes the ORRs Draft Determination published in June 2018. We have invested significant effort in formulating our proposals for CP6 and note the ORRs recognition that it represents an important step forward and is broadly fit for purpose. We remain committed to our vision of 'One team safely delivering brilliant services for customers and taxpayers' and continue to work with stakeholders to develop this further. In this document we respond to the ORRs proposals contained in the Draft Determination in several areas and summarise below our key points for consideration.

Key areas for consideration:

- We have included additional efficiencies but not to the full extent as proposed in the Draft Determination. We consider these additional efficiencies to be realistic but they represent a risk to our plan because we have not yet been able to develop credible proposals to achieve them.
- In parallel we have developed outline proposals for additional expenditure on asset renewals to aid asset sustainability and these are in line with our previous advice and STE recommendations.
- We have made significant progress with our lead operators with regards to joint understanding of the variance between our and their forecast performance trajectories. We would wish to continue working closely with our industry colleagues to address this issue and would propose to publish updated profiles annually throughout CP6 as we jointly develop further mitigations and improvements.
- We have actively engaged with our wide range of stakeholders to better inform our plans for CP6 and will continue to further develop this aspect. We see addressing stakeholder concerns as a key priority for our plans and will embed the approach we have used for PR18 into our annual business planning process.

This document contains updates on changes we are proposing to make in the following areas as a result of the Draft Determination.

Efficiency

We are pleased that the ORR, whilst challenging us to be more efficient, have proposed that any efficiency realised should be expended on further asset renewals for sustainability. Accordingly, we have reviewed the efficiency proposals in our plan and considered where additional realistic efficiencies may be feasible over and above the £430m we have already included. In the time we have had to consider this issue, we are proposing an overlay of additional efficiency for the latter half of the Control Period that amounts to £84m. More work will need to be undertaken, particularly with our delivery partners, to assure their viability and to subsequently realise them.

Asset sustainability

We were unable to address asset sustainability sufficiently in our plans given the financial parameters we had to work within, and average asset life is forecast to increase accordingly. We therefore welcome the ORR's focus on this issue and, subject to the final agreed settlement, we have proposed a prioritised list of additional interventions to better address sustainability for consideration. We recognise that this will be partly funded by our additional efficiency proposals and have scaled our response to match this along with funding potentially available from reductions elsewhere. Overall, it would improve our CSI score over the Control Period by 0.156%.

Service Affecting Failures

We have reviewed our proposals to reduce Service Affecting Failures by 1% per annum and, with the backdrop of increasing underlying SAF over CP6, consider that this remains a challenging target for LNW Route.

Safety expenditure

Our proposals for CP6 included options to address level crossing safety and we are pleased that the ORR has agreed with our approach. We have developed an additional workbank of £25m in value to further improve safety at passive crossing by installing active warning systems, and to continue our successful CP5 approach to level crossing closures to further reduce risk.

Performance

We have worked hard on establishing realistic and credible performance trajectories for CP6 and note Arup's conclusions in their PR18 review that they were realistic and stretching except for Transpennine Express which is considered challenging. We have continued engagement with our operators about the gap between our forecasts and their aspirations. Since the SBP, we have achieved joint sign off with Merseyrail, and developed outline plans for addressing the gaps with our other four lead operators. We will be revising the proposed trajectory for Transpennine Express following recent experience from the May 2018 timetable change and this will result in a reduced forecast.

Stakeholder engagement

Over the two years of developing our plans for CP6, we have held several workshops with the wide range of stakeholders that we have on LNW Route, many 1:1 meetings and covered the topic in numerous management meetings. We have refined our approach over this period and recognised the value of getting the right stakeholder representatives together with the right personnel from our teams. To this end we have introduced the concept of a 'CP6 surgery' where our stakeholders can meet our subject matter experts directly to discuss points of detail, and have already held our strategic workshops in advance of the next update. We have also engaged with our supply chain to raise awareness of the scale of renewals portfolios and efficiency challenge and have the next date in the diary for the autumn of this year. We recognise we can improve and have set ourselves the challenge of providing more clarity on how we have prioritised and addressed stakeholder needs.

Detailed response

Efficiency

As part of the process in generating the Strategic Business Plan, LNW undertook an extensive range of activities in order to explore all possible opportunities to make our business more cost effective. We considered new ideas, new ways of working and collaborated with colleagues across the business to produce a list of efficiency opportunities and an estimated value based on probability of success. There were no perceived gaps in our process and the overall value of efficiencies in our plan amounted to circa £430m. The Nichol's PR18 efficiency review gave LNW a score of 3/5 indicating that we had a reasonable chance of delivering these efficiencies. Through the Draft Determination, we are now challenged with delivering an additional £84m, an increase of about 25%. In wishing to meet the robust challenge of the ORR, LNW is willing to offer additional efficiencies, but at this stage we have no analysis or firm plans to confirm where these savings will come from and have applied the financial outcome in the form of an unidentified overlay. The Route will carry out additional work in the coming weeks and months to determine how the commitment can be delivered.

In our assessment of the opportunities for achieving additional efficiencies, our options are limited. In particular, as we have rolled over our renewals delivery frameworks from CP5 for surety of delivery in CP6, we have little or no ability to change contractual arrangements to any great extent. This impacts a large proportion of our renewals workbank which accounts for almost two thirds of our expected efficiencies. Where further efficiencies may be possible, they will need to be phased in later in CP6. In the meantime, we will continue to revisit our renewals efficiencies in collaboration with our deliverers and see what possibilities there are for incorporating additional 'stretch'. Our allocation of over £1.1 billion of workbank to our Works Delivery function is one critical strategic change in our pursuit of efficiencies. However, this organisation is going through a stage of development and the maturity of our processes is not at the highest level. Hence, the efficiencies derived from our Works Delivery function are likely to be an evolving picture throughout CP6.

Nevertheless, we have considered our renewals delivery efficiencies and looked at what overlay level of efficiency could be additionally applied to our proposed renewals expenditure. It is accepted that with strong clienting and programme management we should have an objective to deliver further efficiency and are proposing that this could comprise additional efficiencies in the following areas:-

- Further optimisation of access opportunities, particularly synergies with HS2 possessions on West Coast, and subsequent savings in Schedule 4 costs
- Additional benefit from earlier scope definition and minimum specification solutions arising from our cost conscious culture and emphasis on lock down of annual workbanks
- Realisation of greater benefits later in CP6 from revised contracting strategies e.g. greater use of Tier 2 & 3 contractors etc
- Efficiency contribution from additional renewals for asset sustainability either from integration with other renewals, volume efficiencies or application of other approaches to the additional scope

Together, we consider that the above could provide £47m in addition to the £279m of renewals efficiencies already built into our plan.

We have reviewed our approach to headwinds following the challenge within the Draft Determination regarding our provisions for them and the revised approach to the provision of contingency funds for risks. We consider that we could reduce the provision for cost escalation in renewals work due to market pressures (primarily driven by HS2) by some £15m as this would become a risk item instead. The challenge to implement the Fatigue Management standard for £7m less than the calculated cost can be achieved by deferring implementation for a period of time until the savings target is met. Given that the original figure was derived from identified roles and associated salaries, there appears little alternative. Together, these would contribute £22m in additional net efficiency.

Finally, in developing our CP6 plan, our proposed scope of renewals works and associated asset strategies have been regularly challenged to verify and validate that our proposals are appropriate to address risks, secure performance and support longer term sustainability. Within the financial constraints, we have limited scope to achieve further scope efficiencies but we have proposed that further benefits can be gained from the Intelligent Infrastructure programme and other innovations in the pipeline e.g. Meerkat, drone surveys, RCM in earthworks to reduce premature intervention on known earthworks sites etc. As a result, we have included an additional potential scope efficiency of £15m pending further investigation of opportunity in this area and retention of suitable R&D funding in CP6.

This can be summarised as follows:-

Efficiency categories	Totals in SBP (£m)	Proposed changes (£m)	% change
Cost efficiencies			
Further optimisation of access and reduction in Schedule 4 costs	33	10	*+30%*
Earlier scope definition and use of minimum specification solutions	67	15	*+22%*
Improved contracting strategies	67	14	*+21%*
Efficiency contribution from additional renewals for asset sustainability	n/a	8	*n/a*
Headwind reductions			
Reduction in renewals headwinds	CAPEX = 70	15	*-20%*
Reduced headwind for fatigue	OPEX = 59	7	-5%
Scope efficiencies			
Greater use of Intelligent Infrastructure products, alternative methodologies etc	n/a	15	n/a
Tailwinds			
None identified	0	0	0
	Total	**84**	

We have used the above potential additional efficiency as a contributor to funding the additional renewals works to aid asset sustainability detailed in the section below.

Asset sustainability

We are unable to address all of the long term asset sustainability issues on LNW Route within the proposed financial parameters for CP6 and this results in a net increase in average asset age over the Control Period. As a consequence, we have increased life extension and refurbishment activities to maximise the availability and reliability of our ageing assets. We welcome the ORR's recognition of this issue and the emphasis on investing for the longer term sustainability of our asset base.

We understand that any additional expenditure on asset sustainability has to be funded through a combination of increased efficiency and a reduction of expenditure elsewhere. We have proposed potential additional efficiencies of £84m in the previous section and have assumed that a further £52m of reallocated funding will be available from elsewhere.

Our proposals for additional expenditure on asset renewals are listed below. All options are scalable to suit the Final Determination outcome and allow deliverability to be considered.

Ref	Activity	CSI addition	Net cost in CP6 (£m)
1	Reinstatement of previously omitted renewals	0.002%	75
2	Earthworks adverse weather sites	0.018%	12
3	Earthworks high criticality sites	0.017%	12
4	Metallic structures	0.070%	24
5	Additional S&C heavy refurbishment	0.049%	13
	Total	**0.156%**	**136**

Our first priority would be to reinstate the previously omitted renewals (Ref 1) in line with our approach detailed in Appendix D of our CP6 Route Strategic Plan. This option includes drainage works and therefore addresses one of the four areas highlighted as benefitting from additional expenditure in CP6. In addition, it restores the renewals workbanks in the three asset groups concerned to the levels upon which the outputs in our plan are forecast.

Our second priority would then be to undertake further expenditure on earthworks. This was identified as the asset with the greatest shortfall in planned expenditure in various assurance reviews and is our greatest concern. However, our proposals for CP6 were constrained by the financial criteria applied. Should additional funding from elsewhere be available, further expenditure in this asset would be undertaken and we have proposed two options; adverse weather sites (Ref 2) and high criticality sites (Ref 3) for consideration. These would have the highest sustainability benefits in addition to helping to reduce train accident risk and other performance issues associated with earthworks. They have been scaled for deliverability and likely funding availability.

Our third priority would be to further increase our spending on metallic structures (Ref 4). Here we have proposed a range of interventions appropriate for the mix of asset we have. For example, we have proposed additional painting of metallic structures as, at CP5 intervention rates, our metallic underbridges are being repainted once in 194 years, which is unsustainable based on a typical 30 year life of a painting system. We have also included additional expenditure on signal and OLE structures to be able to expedite remedial or renewal works following enhanced inspections and assessments. This would reduce the likelihood of similar incident on signal structures as occurred at Wootton Bassett and Hunts Cross, and to OLE structures at Liverpool Lime Street.

Finally, our fourth priority would be to increase expenditure on S&C heavy refurbishment (Ref 5) based upon their contribution to asset sustainability versus additional cost.

Service Affecting Failures

In our Strategic Business Plan, we have forecast a reduction in Service Affecting Failures (SAF) of 1% per annum over CP6. This represents a significant challenge when the trend of failures on LNW, as predicted by modelling undertaken on our behalf by STE, is taken into account. Of the three key asset failure types contributing to the SAF metric, namely points failures, signal failures and track faults, they are forecast to increase by 1.9%, 0% and 4.2% respectively over CP6. In addition, we will see reductions in access due to longer operational hours with new timetables which will provide further challenge to being able to undertake the increased volume of maintenance and renewals work contained in our plan. We therefore view our proposal to achieve a 2% improvement per annum over the underlying trends in more challenging circumstances as realistic.

Safety expenditure

In prioritising our proposed expenditure for CP6, we could only focus on asset condition led issues as regards level crossings but included three investment options in our Route Strategic Plan for further expenditure to improve safety in this area to improve safety. We are pleased that the ORR has agreed with the principle of our proposals and that they have recommended that we have a further £25m of funding to expend on safety risk reduction at level crossings.

We recognise that level crossings represent one of the principle public safety risks on the railway and we have already moved to improve our focus on them by recognising level crossings as a standalone asset management category in CP6, as opposed to a subset of other more established disciplines, (Signalling, Off Track, etc). This shift will enable enhanced scrutiny of the level crossing estate, promoting Network Rail's strategic aims and furthering level crossing safety. In particular, the change will better balance LNW Route's maintenance of the active level crossing estate with the objective to increase the number of active train detection warning systems on the network at passive level crossings.

The packages of work identified for the additional safety funding reflect Network Rail's key strategic aims for level crossings. Applying these to LNW Route, we are proposing the following priorities of activity for the additional safety funding.

- Continued focus on targeted level crossing closures;
- Increased number of active train detection warning systems on the network;
- Prioritised elimination of passive crossings;
- Deployment of technology to supplement and replace whistle boards and telephones;
- Technology and innovation designed to maximise safety and performance.

Although significantly reduced over successive years, the risk at passive footpath and user worked level crossings accounts for over half of the total level crossing risk on the network. In pursuing technology deployments, LNW Route's CP6 plan seeks to target:

- Location of high risk, high line speeds and high traffic volumes;
- Footpath and bridleway crossings with sighting deficiencies and whistle board protection
- User-worked crossings equipped with telephones in long signal sections and/or subject to high signaller workload.

After further discussion with the ORR, who recognise that there is benefit to broaden the application of the safety funding beyond overlays at passive level crossings, we are proposing to prioritise expenditure across passive crossings and undertaking more closures as detailed in the table below.

Intervention	Work type	No. of crossings	Net cost in CP6 (£m)
Upgrade passive to active crossings	iMSL	10	5
	oMSL	40	6
	Meerkat	45	3.6
Crossing closures	Strategic closures	20	10
	Opportunity closures as occasions arise	5	0.4
		Total	**25**

LNW Route's plans for CP6 focus on the installation of modular solutions for level crossings, minimising the disruptive access required for delivery. Much of the work can be delivered during mid-week possessions, smoothing the work bank for Network Rail's delivery teams. Framework contracts are in place for the supply of oMSLs and a similar arrangement will be introduced for Meerkat once available for procurement. Should Meerkat be delayed we would install oMSL solutions instead.

Performance

a) Trajectories

Our approach to developing performance trajectories for our lead operators across CP6 has been a balance between realism and ambition. We have used an iterative process based on data, knowledge and experience, and judgement. We used current and recent performance trends used as a starting point, identified risks and opportunities over the next six or so years and employed a transparent quantification of them to develop the future trajectories.

In the Arup Report 'Assessment of train performance trajectories in Network Rail's Route Strategic Plans for PR18', they commented on our proposed trajectories for CP6 as follows.

- *Chiltern and MerseyRail are considered realistic targets given the relative stability of operations.*
- *VT and WMR are considered realistic and stretching given the scale of the changes to navigate on the route and with the uncertainty of HS2 works.*
- *TPE is considered more challenging given the plans to extend services to Scotland and the complex movements round Manchester, the works required in the north of England and current performance levels.*

We have compared our proposed trajectories with our operator's aspirations, and have been reviewing the gaps where appropriate and what could be done to achieve closer or actual alignment with them over the last six weeks. One of our lead operators, Merseyrail, has agreed our proposed performance trajectory since the publication of the SBP. For our four remaining lead operators where we have a gap between our forecast trajectory of what we consider our infrastructure and their known activities can sustain compared to their aspirations or franchise obligations, we have developed Joint Performance Strategies. These include a section describing the gap along with thoughts on how it might be addressed. We will continue to work with our lead operators to develop these sections further and ensure they are fully representative of our shared views, initiatives and future performance targets. Since the timetable change in

May 2018, we have recognised the need for a revised performance plan for Transpennine Express. This is likely to result in reduced performance levels reflecting the experience of the resilience in the current timetable.

In our stakeholder events and detailed engagement meetings in mid-2018, we have explained our approach to defining our performance trajectories and have had useful dialogue about them being achievable and realistic. We have or will have held performance workshops with each of our lead operators to identify further opportunities and ideas by the end of September 2018. As these progress, we will develop alternative trajectories but would intend for these to be stretch trajectories rather than agreeing any formal increases in our targets. In each strategy document, we have stressed that we will continue to follow an annual target setting process.

Any key changes will be reflected in the next iteration of our Route Strategic Plan.

b) Sustained Poor Performance

LNW Route is concerned that the current SPP threshold at 10% is too readily triggered at 'normal' levels of performance fluctuation. Train operators for which SPP has been triggered have so far been unable to produce evidence to show that they are experiencing revenue losses over and above those provided for by the formulaic Schedule 8 payments, and hence no claims have been successful so far in CP5.

Having such a high number of train operators being able to claim against Network Rail through the SPP mechanism, but being unsuccessful in doing so, creates a great deal of unnecessary industry tension and also wastes cost and time in disputing SPP claims. This can often distract from important joint-industry initiatives, for example on performance improvement schemes. WE therefore consider it is important for all industry parties that the SPP threshold is set at an appropriate level for CP6, which is not too readily triggered but which also provides financial protection to train operators when Schedule 8 genuinely does not provide sufficient compensation in periods of genuinely sustained poor performance.

We welcome ORR's proposal to increase the SPP threshold to 25% for CP6, as we consider that this is the correct direction of change.

Stakeholder engagement

LNW Route has a wide range of stakeholders and almost every UK operator uses some of our infrastructure. Engaging with all of them has proved both challenging and rewarding, particularly as we have found great enthusiasm to help us 'get it right' and for the unprecedented visibility we have given of our approach, drivers and detailed plans. This extends to giving all stakeholders and suppliers access to our SharpCloud system to view our detailed workbanks in both renewals and maintenance.

In engaging with such a diverse and geographically spread stakeholder community over the last two years of development of our plans for CP6, we have learnt who within each organisation to liaise with, what topics are of concern to whom, and what level of detail is appropriate. This has shaped our latest approach in 2018 whereby we have already held two strategic level workshops with rail industry stakeholders and a detailed surgery with various operators on LNW, and will be holding joint workshops with the System Operator with local authorities and Local Enterprise Partnerships, and further workshops with our supply chain. The detailed surgery was a recent innovation whereby we gave access to our subject matter experts from various parts of our business for them to discuss and be challenged on their proposals for CP6. We have received very positive feedback on this and we intend to hold more in the future.

Whilst it is pleasing to note that our engagement has been considered inclusive, we recognise the need to be clearer how we prioritised stakeholder needs and how these are addressed in our proposals. This will be addressed in the next update of our plans and in our proposals for annual stakeholder engagement activities as part of our continuous business planning approach.

Group Portfolio Fund

We consider the provision of an allowance for managing uncertainty a major step forward for us to be able to have greater confidence in delivering our plans for CP6. We therefore welcome the ORRs support for this approach and for the proposed allocation of some of the centrally held Group Portfolio Fund to Routes. We will work with both the Centre and the ORR in better defining how this will work with appropriate governance and transparency, and how the concept of contingent renewals can be realised. We are also reviewing our uncertainty analysis to bring it up to date, provide a year by year view and ensure it has a consistent approach with the emerging governance principles.

Research & Development

LNW Route are concerned about the possible reduction in R&D spending in CP6, especially as we do not have headroom in our own plans to undertake this ourselves. We support continued R&D expenditure at an appropriate level to enable a step change in the way we manage our infrastructure, to deliver increasing value for money, and minimise impacts on an ever busier railway. In addition, some of our efficiencies are dependent upon outcomes from various R&D initiatives and our future success in CP7 will be dependent on developing products and techniques in CP6 in readiness.

Accordingly, we would add our support to requests already made to reconsider reducing R&D expenditure significantly in CP6 and note that our proposals for additional asset sustainability expenditure and efficiencies are sized to allow for the retention of the majority of our proposed R&D expenditure.

Other Route specific issues

On LNW Route, we have four further issues with regards to our Route Strategic Plan and the Draft Determination. They are with regards to the risks in CP6, the level of funding for the Crewe HS2 Integration Works, inclusion of Watford North Junction, and funding of the replacement of ATP on the Chiltern lines.

a) Risk

Whilst we welcome the allocation of risk provisions to the Routes in CP6, we are concerned about the adequacy of these to allow us to manage the full range of risks expected to be mitigated. On LNW Route we have significant risks from:-

- HS2 construction on and around our infrastructure, and associated additional traffic generated from transport of tunnelling spoil
- Availability of access to undertake our proposed works
- Achievement of efficiencies during CP6
- Impact of future timetable changes, particularly at May 2019 in light of December 2018 deferrals
- Impact of increasing growth in train miles and passenger numbers

In addition, there are also several market factors outside of our control. We are cautious in committing to an unrealistic plan given that the impacts of Brexit and HS2 may adversely impact contractor rates – one of the key efficiency opportunities identified in our plan.

b) Funding for Crewe HS2 Integration Works

Our SBP contained a £270m cash contribution for renewal works at Crewe in CP6 that would be absorbed or undertaken differently as part of the HS2 integration works proposed there. As the scheme undergoes its development stage, it is becoming apparent that unless further funding is secured, it may not deliver an appropriate railway industry solution. In order to assist the funding package for the scheme and in addition promote further investment in asset sustainability, we would recommend consideration is given to increasing this contribution by £50m with the inclusion of Crewe North Junction S&C renewals which otherwise would be undertaken in CP7.

c) Watford North Junction

We are pleased that development funding has been released in CP5 to the System Operator to progress Watford Junction Station Passenger capacity. A key element of this is the station's ability to become the terminating point for West Coast services during closures of Euston. Presently there is no reversing facility on the fast lines at Watford Junction, and when Euston station is closed for HS2 enabling works etc, trains from the north have to terminate at Milton Keynes. This is an unsatisfactory arrangement and causes significant passenger disruption. HS2 have advised they are unable to fund the provision of a crossover at Watford North to enable trains to terminate there instead. Providing this crossover and the ability to terminate fast line trains at Watford would allow passenger transfer to London Overground for onward travel into London rather than by replacement buses. We would recommend inclusion of these works at £5 to 10m to protect the industry's public reputation.

d) Chiltern ATP

Presently, train protection on the Chiltern lines is provided by an ATP system which is now becoming obsolete, so much so that the operator, Chiltern Railways is finding it increasingly difficult to source spare parts for the train borne equipment. They are getting to the stage that they may have to take trains out of service due to lack of ATP spares and are forecasting that this will commence in the near future with consequent impacts on the level of service they can provide. The trackside equipment is viable for some more years yet but replacing it with a modern TPWS system would cost an additional £30m. We were unable to include this in our base plan for CP6, but included it as an additional option within Appendix D of our Route Strategic Plan. We would recommend that consideration is given to funding this work as part of an industry solution to a safety critical obsolescence issue.

Scotland response to ORR's Draft Determination

31 August 2018

Contents

Cover photo: the first new Class 385 train entering in to passenger service on 23/07/18, travelling on the newly electrified route between Glasgow - Edinburgh. This train introduction is just one part of a significant fleet and infrastructure enhancement in CP5 that will ultimately see 25% more carriages operating on the Scottish network, as part of our vision to build the best railway Scotland has ever had.

Executive Summary

Our two key areas of concern in relation to this consultation are:
- ORR's Draft Determination proposed savings to the Scotland plan from reduced R&D expenditure, increased property income and additional efficiency, and that this funding could be directed away from our core O,M&R plan to other Transport Scotland priorities – we have reviewed our Route plan and although this will impose more risk, we accept an efficiency stretch. However, we believe that a proportion of funds released through identified savings in Scotland should be retained within O,M&R to fund two emerging cost issues that ORR were not sighted on at the time of the draft determination, rather than impact sustainability through deferral.
- **that our CRM-P trajectories, Schedule 8 benchmarks and Sustained Poor Performance thresholds should be based on our latest performance forecast**, rather than an, initially, aspirational 92.5% PPM target.

In our Strategic Business Plan, Network Rail set out its vision *to build the best railway Scotland has ever had* – growing passenger and freight volumes by maximising the benefits from the significant recent investment in Scotland's railway, while continuing to focus on providing a safe, performing network every day for all rail users, with a particular focus on addressing the resilience of the network to extremes of weather. Network Rail, through the Scotland route and other functions' plans, also set out how it would respond to deliver the detailed requirements of Scottish Ministers, as published in their 2017 High Level Output Statement (HLOS).

Network Rail welcomes ORR's conclusions in their draft determination (DD) that our plans are well founded, and broadly meet the requirements of the Scottish HLOS, while recognising that work remains ongoing to develop plans to deliver some of the HLOS requirements. Included within our DD response is an 'HLOS Tracker', which shows how Network Rail (Route, System Operator and FNPO) intend delivering these requirements. A number of these require coordinated activity across the industry (for example, including passenger and freight operators) and we anticipate continuing engagement with ORR and Transport Scotland to provide greater clarity of the role each party will play in delivering these plans.

There are a small number of areas where Network Rail does not agree with the initial conclusions in the DD. These are summarised as below, and we would welcome further dialogue on how these will be reflected in the Final Determination (FD).

Efficiency challenge

1. The ORR have identified a further £108m of savings to Scotland expenditure through a reduction in research & development (R&D) investment (£32m), stretch to forecast property income (£3m) and an additional efficiency challenge to Network Rail as a whole (£73m). We continue to believe that the industry does not invest sufficient funds in R&D, and this case is set out more specifically in Network Rail's overall response to the DD. Our revised R&D plans have clear alignment with Scottish Government priorities and are supported by the Scotland Route. We also believe that the property income and efficiency stretches are not well evidenced, and impose more risk on our plans. Nevertheless we have taken the ORR efficiency challenge on board, and are proposing reducing the Scotland Route plan by £56m, split as follows:

> - removing £31.9m of headwinds, where we consider, following review, that the route-based risk funding is a more appropriate means of managing the risk of cost increases in the plan.

- applying a stretch of £10.7m to our 'access efficiencies' initiative, to fully mitigate the headwind related to increasing costs of land access (to be delivered through Project Sprint and other initiatives).
- reducing CP6 cost forecasts by £7.8m to reflect the early purchase of materials through the 18/19 headroom fund, to support CP6 mobilisation
- applying a £5.6m scope efficiency to our renewals workbank to reflect benefits from improved asset knowledge expected through CP6

Reinvestment of efficiency

2. Unlike in England & Wales, the DD states that funds made available through reductions in R&D and increases in property income and efficiency do not need to be directed towards asset investment for sustainability in Scotland, but could be made available to Transport Scotland for investment in other priorities. We believe that a proportion of the cost reductions targeted by ORR should be retained within the core OM&R plan. This would allow us to address two particular emerging issues that ORR were not sighted on at the time of the DD, decreasing the risk of deferring volumes, and therefore impacting ORR's sustainability assessment of the plan, or reducing the size of the risk fund at the start of the control period. The particular concerns are:

- Carstairs renewals (S&C, OLE and signalling renewals). Further development of this project has shown that the necessary scope and likely staging of the works will increase the anticipated final cost by £50-£100m, from an initial c.£53m (the early, unit-rate based estimate included in the SBP) to a latest estimate of £150m (subject to further refinement and value engineering) – an additional £50m has been included here.
- Replacement of bridges which have recently been identified to be at risk of failure linked to high alumina cement. Surveys initiated following the closure of a bridge in July 2017 have identified seven further bridges that will need to be replaced in CP6 at a cost of c.£20m. This risk was highlighted in the assumptions included in the SBP, but not costed in the plans, since the surveys had not been undertaken at that point.

Train performance

3. ORR have stated that Network Rail should be measured against the 92.5% PPM target as set out in the HLOS for all five years of CP6. While we fully support the intent of working towards 92.5%, we believe that this is unlikely to be achieved from the start of CP6, and this view has been reinforced by performance trends since the publication of the SBP, influenced in part by the removal of 'skip-stopping' as a performance-management tool. While we recognise the ORR's obligation to Network Rail is to 'achieve the target to the greatest extent reasonably practicable having regard to all relevant circumstances' it is important that the likely (not aspirational) PPM outcome is reflected in CRM-P trajectories, Schedule 8 benchmarks and Sustained Poor Performance thresholds. Our latest view of PPM and CRM-P trajectories is provided below.

Other items for discussion

Finally, there are a number of areas where we believe additional clarity would be beneficial in the FD, and we will continue to work with ORR and colleagues from Transport Scotland on these. Key areas include:

1. How Transport Scotland's HLOS statement that it wants to take decisions on which major renewals projects proceed, should be taken forward. Our view is that Network Rail should retain ultimate accountability for decisions on renewals, but that we should work together to develop improved means of consultation on major renewals decisions. We have explained this position to Transport Scotland.

2. Whether there should be any change to Scotland's allocation of central costs, following ORR's review of allocation methodology with Transport Scotland.

3. The restrictions created by the wider financial framework, in particular, how the group portfolio fund and route risk fund will work in practice in Scotland, and what rules will be placed on moving budget between years and whether these will operate at GB or Scotland level.

Detailed response

Efficiency

As noted above, an additional £56m net efficiency has been identified in our plan through:

- removing £31.9m of headwinds, where we consider, following review, that the route-based risk funding is a more appropriate means of managing the risk of cost increases in the plan.
- applying a stretch of £10.7m to our 'access efficiencies' initiative, to fully mitigate the headwind related to increasing costs of land access
- reflecting the early purchase of materials through the 18/19 headroom fund, to support CP6 mobilisation £7.8m
- applying a scope efficiency stretch to our renewals workbank to reflect benefits from improved asset knowledge expected through CP6 £5.6m

The impacts on our headwind and efficiency plans as published in our SBP are illustrated in the following tables:

Headwinds	Fishbone category	SBP	RF4	Movement	Comment on change
Cost of working in newly electrified areas	Delivery	**5.5**	**5.5**	**0.0**	No change
Increased contract rates driven by market pressures	Commercial	**20.3**	**0.0**	**-20.3**	Removed as a Headwind, with risk to be covered by route risk fund
Increased costs of third party access or acquisition	Commercial	**10.7**	**10.7**	**0.0**	
Policy and/or legislation changes	Design	**7.2**	**0.0**	**-7.2**	Removed as a Headwind, with risk to be covered by route risk fund
Reduced access/Shorter blockades	Access	**4.4**	**0.0**	**-4.4**	Removed as a Headwind, with risk to be covered by route risk fund
Synergies between enhancements and renewals work in CP5 not being repeated	Workbank planning	**3.9**	**3.9**	**0.0**	No change
		52.0	20.1	-31.9	

Renewals Efficiencies	Fishbone	SBP	RF4	Movement	Comment on Change
Activity/Scope Efficiencies					
Impact of RCM	Scope Efficiency	**-8.0**	**-8.0**	**0.0**	no change
Impact of Rail milling	Scope Efficiency	**-13.4**	**-13.4**	**0.0**	no change
Reduced activity due to other new technologies	Scope Efficiency	**-14.0**	**-14.0**	**0.0**	no change
Scope Efficiencies due to Sustainability Fund				**0.0**	
Activity/Scope Efficiencies		***-35.4***	***-35.4***	***0.0***	
Cost Efficiencies					
Optimisation of access (use, agreement, planning)	Access	**-16.8**	**-27.5**	**-10.7**	Stretch applied to mitigate headwind associated with increased land access cost. To be delivered by Project Sprint and other initiatives.
Early contractor involvement, early scope definition, and use of minimum specification solutions	Design	**-39.1**	**-39.1**	**0.0**	
Stable workbank	Workbank planning	**-14.6**	**-14.6**	**0.0**	
Development of works delivery capabilities	Delivery	**-12.1**	**-12.1**	**0.0**	
LEAN (Right First Time delivery, Better Every Day, Structured Continuous Improvement)	Delivery	**-18.8**	**-18.8**	**0.0**	
ESD benefits	Technology	**-6.1**	**-6.1**	**0.0**	
Other innovation and technology benefits	Technology	**-10.0**	**-15.6**	**-5.6**	Expectation of additional scope efficiency as asset knowledge improves during the control period.
Improved contracting strategies/rates (inc. packaging of works)	Commercial	**-23.1**	**-23.1**	**0.0**	
Supply Chain Operations initiatives	Commercial	**-14.5**	**-22.3**	**-7.8**	Track £7.8m advance material purchase through headroom.
Tailwinds				**0.0**	
Cost Efficiencies due to Sustainability Fund	`			**0.0**	
Cost Efficiencies		***-155.1***	***-179.2***	***-24.1***	
		-190.5	**-214.6**	**-24.1**	

Asset sustainability

Following publication of the SBP, there have been two material changes to our renewals programme. It is our proposal that a proportion of the cost savings identified in our DD response should be retained within O,M&R to address these cost increases. If this could not be agreed, deferrals would need to be made to volumes originally included in our SBP. This would impact the sustainability assessment of the overall plan. Alternatively, there could be early use of the route's risk funding, but this would be undesirable due to constraining our ability to manage risk later in the control period. The detail of these changes and potential impact is summarised below.

Carstairs renewals project

The single largest renewal investment in our CP6 plan is the replacement of the life-expired junction at Carstairs on the West Coast Main Line. This work has been previously deferred, with life extension works undertaken in CP5, and it is now essential that it is completed in CP6 to sustain safety and performance on this key cross-border route. The renewal of the associated OLE and signalling equipment has been aligned with the track works. The works are extensive, with 35 point ends to be renewed (12 remodelled, nine like for like, and 14 abandonments), and 10km of plain line track renewal. In addition to addressing core safety and performance issues, the project will correct non-compliances in the track geometry which will allow for improved line speeds on the main lines and routes between Glasgow and Edinburgh via Carstairs.

At the time of the SBP, a unit-rate based approach was applied to costing the project, as the best available source of data. This forecast the costs as £53m (£35m track, £12.4m signalling, £6m electrical power). Since the SBP, a single option has been developed for the track layout, allowing a more detailed review of the necessary ancillary works (particularly OLE alterations) and likely staging of the project. Although this is still a high-level estimate, the bottom-up costing is now £150m. The higher costs reflect the complexity of the works, and lessons learned from undertaking the Polmadie and Rutherglen renewal project in CP5. This estimate will be subject to further refinement and value engineering through GRIP 1-3, but at present it is prudent to assume at least £50m of additional cost related to Carstairs should be included within our plan.

As well as affecting our cost estimates, the scale of the work required to deliver the Carstairs renewals, and the necessary staging of the works has led to a review of the programme, and therefore cost phasing within our plan. This has moved the largest element of these works from year three to years four and five.

In the event that the increased cost of the Carstairs renewals cannot be offset by OM&R efficiencies, a number of deferrals have been identified to fund the shortfall. These are lower priority that the Carstairs work, although will have an impact on longer term sustainability and are undesirable. They include removal of 22km plain line full renewal, 25km HO ballast cleaning, 2.5km Steel/concrete scarify, 5km HO track relaying and four S&C full renewals.

Accelerated bridge renewals due to the presence of High Alumina Cement (HAC)

HAC was a popular construction material between 1950's and early 70's, as it developed strength rapidly and was therefore relatively fast to manufacture. However, it is prone to a crystalline re-arrangement (or 'conversion'), which can result in reduced strength and also vulnerability to chemical attack when exposed to water for long periods. Following a number of high-profile structural failures in the 1970s HAC stopped being used in the UK, and was not considered to present a significant risk to our current population of bridges. Unfortunately in July 2017, HAC was identified in an overbridge on the Cathcart Circle in Glasgow, leading to an emergency road closure and accelerated bridge replacement. Surveys initiated following this have identified a minimum seven further bridges that will need to be replaced in CP6 at a cost of c.£20m (BCH 058/080, BCH 058/82, BCH 058/083, GSW 161/187, NNH 236/114, NEM5 240/162, NEM5 240/160). This risk was highlighted in the assumptions included in the SBP (Appendix B of Route Strategic Plan: p84, no.13), but not costed in the plans since the surveys had not been undertaken at that point.

Our latest cost estimates now include a £20m allowance for additional bridge replacement. In the event the cost of these additional bridge replacements cannot be offset by OM&R efficiencies, a number of deferrals have been identified to fund the shortfall:

- 36 underbridge painting schemes resulting in an increased average re-painting cycle rate from 1 in 52 years, to 1 in 81 years (periodicity subject to further review). We would need to carefully consider the reputational value of some schemes that are on lower priority routes, or whose primary driver is aesthetic/regeneration rather than condition (e.g. Gorbals regeneration schemes, and one Edinburgh city centre bridge).
- Two footbridge and one overbridge painting scheme.
- Three weather resilience schemes, including UB 070/021 Niddry Burn, where driver is performance rather than condition.
- Policy Level 2 scour schemes (Scour risk score >15.5 on Route Criticality 1 & 2 routes).

The combined impact of the proposed efficiencies, additional costs, and changes to renewals cost phasing is illustrated in the below table:

17/18 Prices	SBP Post-efficient CP6						Changes						Revised SBP Post-efficient CP6					
	FY20	FY21	FY22	FY23	FY24	CP6	FY20	FY21	FY22	FY23	FY24	CP6	FY20	FY21	FY22	FY23	FY24	CP6
Opex	196	192	190	191	189	958							196	192	190	191	189	958
Income	(52)	(52)	(52)	(52)	(52)	(260)							(52)	(52)	(52)	(52)	(52)	(260)
Renewals *	313	431	405	323	242	1,714	(1)	(1)	(19)	18	18	14	311	430	386	341	260	1,728
Total IOMR	457	571	544	461	380	2,412	(1)	(1)	(19)	18	18	14	455	570	524	479	398	2,426
Risk Fund	12	12	12	12	12	59							12	12	12	12	12	59

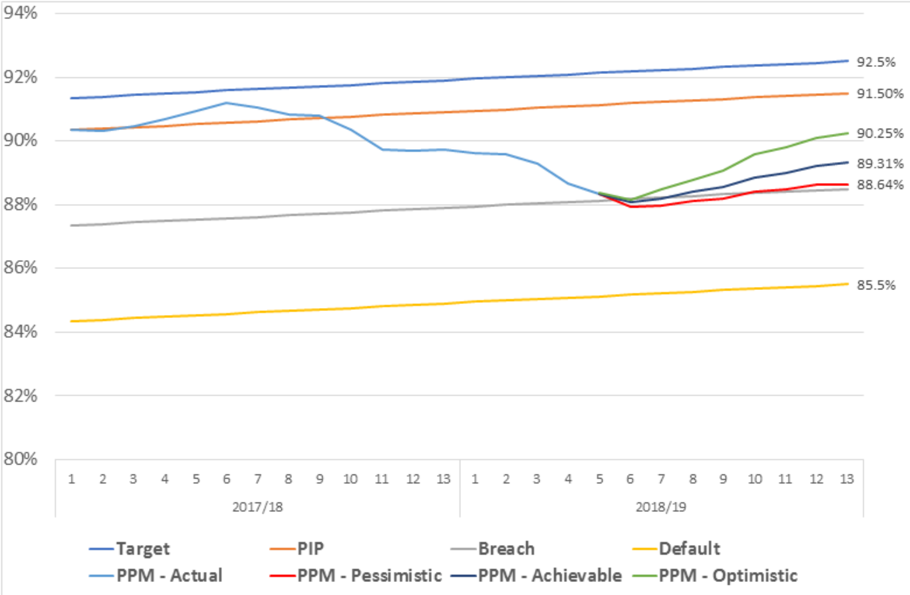
Safety expenditure

In line with the ORR challenge within the Draft Determination on the volume of user-worked crossing upgrades in the plan, Scotland Route has submitted a list of the highest risk user-worked crossings in Scotland, that are not otherwise planned to be addressed in CP6. These will be considered as part of a GB-wide prioritisation and GB proposal for additional funds.

Performance

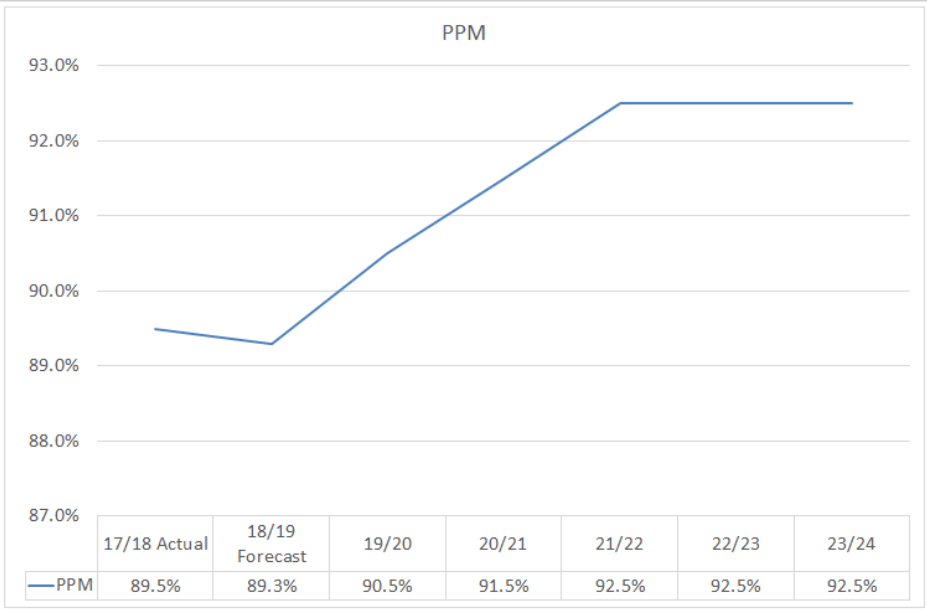
On the 13th July we provided ORR with our latest view of performance trajectory and associated CRM-P. As noted above, while we fully support the intent of working towards 92.5%, we believe that this is unlikely to be achieved from the start of CP6, and this view has been reinforced by performance trends since the publication of the SBP, influenced in part by the removal of 'skip-stopping' as a performance-management tool. While we recognise the ORR's obligation to Network Rail is to 'achieve the target to the greatest extent reasonably practicable having regard to all relevant circumstances' it is important that the likely (not aspirational) PPM outcome is reflected in CRM-P trajectories, Schedule 8 benchmarks, and Sustained Poor Performance thresholds.

Disappointingly, the latest forecasts from the ScotRail Alliance performance team suggest that the starting position for CP6 will now be lower than the 90.5% forecast in July. Our current view is that we will exit CP5 with a PPM of 89.3%. This is on the basis of achieving our original targets for each of the remaining periods of the year, and will be dependant particularly on the effectiveness of our Autumn plan, which has been extensively reviewed for 2018-19.



The significant gap between the forecast 89.3% start point, and the HLOS target of 92.5% means that it is extremely unlikely that there will be enough systematic performance improvement outputs from the Donovan Review and other improvement plans to achieve 92.5% in year one of CP6. Drilling down, in terms of PPM attrition categories it is the ops/specification and reactionary delay category which will not be at the level required to achieve 92.5%.

Given the lower start point, we have now updated our forecast PPM trajectory for CP6. We have targeted an initial 1.2% improvement in 19/20 to address current poor performance, and then an annual 1% improvement, which Network Rail Scotland believe is a challenging but achievable target, with the trajectory shown below. In context, this will require a reduction in PPM failures of more than 10% per annum.



The revised PPM trajectory has been reflected in an updated Scotland CRM-P forecast (see below), showing a value of 0.89 would be required by the end of the control period. This is based on the latest split of delay impacting on ScotRail, our assumption that improvements will come from both Network Rail and ScotRail, and the impact of other operators' PPM trajectories who operate in Scotland.

	18/19	19/20	20/21	21/22	22/23	23/24
Scotland CRM-P	1.18	1.06	0.96	0.89	0.89	0.89

Stakeholder engagement

Scotland Route together with FNPO and System Operator continues to engage with stakeholders through periodic industry planning forums in Scotland. A specific stakeholder workshop is planned for the 20th of September to provide an update on the development of our plans and brief stakeholders on our response to the Draft Determination.

Route readiness for CP6

Scotland Route has a continuous planning process, and is actively preparing for the early years of CP6. Although there are a number of commercial frameworks that will change-over during year one of CP6 steps have been taken to minimise any disruption to the delivery of works. Key highlights of readiness activity include:

Access

- Virtually all CP6 year one disruptive possessions for planned renewals and enhancements (rollover from CP5) have been uploaded to the Possession Planning System (PPS).

Maintenance readiness

- In preparation for CP6 a further 108 front line maintenance posts have been consulted. These were originally planned to be recruited during the first two years of CP6 but utilising CP5 headroom, the posts have been accelerated into the end of CP5, increasing front line maintenance capability from 1035 to 1143 posts, with the increases strengthening offtrack and electrical power resource in line with our SBP.
- A Scotland recruitment campaign is underway and so far we have received over 1200 applicants. Interviews are scheduled in September, and we have an aim to fill the vacancies by the start of CP6.

Workbank planning

- Remits for year 1 renewals are being delivered to enable authority to be sought for development this year, utilising headroom funding. This will allow implementation authorities to be presented before the end of CP5.
- As noted above, opportunity is being taken for the early procurement of materials in CP5 to support delivery readiness.

Efficiencies

- Milestone plans with identified owners have been developed and documented on Scotland's efficiency tracker.
- Progress with delivering these plans is now a core part of periodic asset governance meetings.

Commercial frameworks

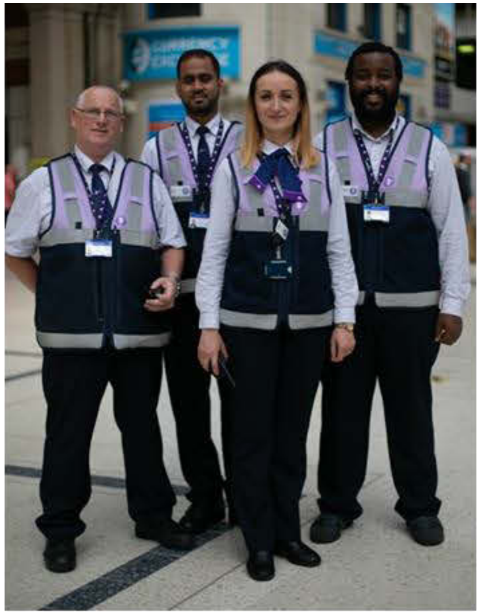
- Buildings and Civils (B&C) minor works frameworks are now in place (going live in April ‘18). Major B&C frameworks are on target for go-live in November ‘18. Revised signalling frameworks are expected to be in place for June ’19, with separate procurement discussions being undertaken in parallel for our first critical signalling project in CP6 (Edinburgh control system renewal). Work is also progressing for a transition to a new combined Scotland Track Alliance with go-live in August ‘19 (replacing current separate plain line and S&C contracts, and creating a dedicated Scotland team).

Appendices

Attached to this summary document is version one of our HLOS Tracker document, showing how we intend responding to the requirements for Network Rail set out in Table A.3 of the supporting annex to the Scotland Summary.

South East Route response to ORR's Draft Determination

31st August 2018



Contents

Executive Summary

The South East Route welcomes the Draft Determination and its key theme of greater investment in renewing the railway to put it on a more sustainable footing. This will make a start to providing a more dependable service to our customers and stakeholders during CP6 and beyond.

In a devolved business it is for the Route to make the case, on behalf of its customers and stakeholders, for the best possible settlement to deliver a sustainable railway that meets their needs for today and the future. With the proposed additional funding allocated to the Route we have been able to incorporate some of the work included in our Route Strategic Plan (RSP) Vision Schemes to target our poor condition track and metallic structures. The majority of our Vision Schemes remain unfunded at this stage, including our schemes to improve Safety and Train Performance, and we welcome the opportunity for further dialogue with ORR on whether the situation for the South East Route's customers and stakeholders can be further improved ahead of the Final Determination.

Train Performance

In our RSP we forecast train performance at 80% confidence in order to provide a level of performance that the Route was reasonably confident in achieving in return for the funding available. This was cognisant of the uncertainty around the implementation of the Thameslink Timetable (TT) and the systemic change to the operability to the network. As directed by the Draft Determination, we have revised our forecast to be based on a 50% confidence level.

Our priority has been to make sure that all assumptions remain valid and that our approach is consistent with that of other Routes. It must be noted that a 50% confidence level means that we are as likely to miss this target as we are to hit it. This should be recognised in terms of any regulatory action in the event that the target is not met.

There remains significant uncertainty around the forecast driven largely by the TT implementation. Whilst lessons have been learnt on driver availability following May 18 TT, due to the limitations of the existing timetable we still do not yet know if the remaining assumptions will be valid. Additionally, the impact of the recovery of the May 18 TT will remain within the system for some time to come. Uncertainty also exists around franchisee changes for both Southeastern and GTR which could fundamentally affect our assumptions on TOC performance.

Our revised train performance forecasts for the end of CP6 are 83.9% and 89.0% PPM for GTR and Southeastern respectively. This equates to a CRM-P of 2.81. As before, we have continued to engage and collaborate with our customers throughout our review process, especially with our Joint Heads of Performance. However, we recognise that whilst we believe our plan is the best plan for the funding available, it does not deliver the level of train performance our passengers deserve, which would be improved upon if there was the opportunity to pursue our Performance Vision Scheme.

We are concerned that the potential reduction in the CRM-P floor from 30%, and the period on which this will be based, will result in regulatory action on a disproportionate basis, noting our forecast is now at a 50% confidence level. We are engaged with the Network Rail National Performance Team who will respond directly on this matter.

As previously communicated in our RSP, given the potential change to the operability of our Route following the implementation of the TT and re-franchising taking place for both of our customers, it is likely that train performance forecasts will need to be re-opened early in CP6. This will also require a re-calibration of Schedule 8 to avoid unreasonable risk to either the Route or our customers. We would welcome acknowledgment of this by the ORR.

Asset Sustainability Funding

As a Route that has some of the oldest and poorest condition assets in the country we are pleased that the ORR has recommended additional investment on asset sustainability. We note ORR's recognition of our poor ballast and metallic structures assets in particular.

We are supportive of a transparent and evidence based approach to funding allocation that is focused on maximising risk reduction across the national network during CP6 and reflecting stakeholder needs. We think the initial allocation of the additional funding to the Route of £145m (consistent with the £1bn proposed by ORR) is not fully reflective of the relatively poor condition of our asset base. Our allocation has since been reduced to £65.7m (consistent with overall DD response). Within this allocation, our highest priority would be to develop a reduced track High Output Balance Cleaner package of works, Package A in our Asset Sustainability Submission including targeted heavy refurbishment from Package B. As we would not be able to afford our Charing Cross structures scheme, we would prioritise the remaining funds to our metallic structures package A scheme.

The Efficiency Challenge

The South East Route's efficiencies plans are already ambitious and challenge the Route beyond anything delivered in CP5.

During the development of the SBP we worked together with our deliverers and with national working groups to put together a challenging but deliverable portfolio of efficiencies. We developed a clear evidence base to our pre-efficient costs based on current rates. We prioritised our Constrained Base Plan in terms of managing overall asset risks and reduced renewals costs by de-scoping renewals where there was an element of scope targeting performance enhancements over and above the core renewal. On top of this we set ourselves a challenge to deliver work 10.2% more efficiently (gross) by the end of CP6.

We also assessed the main cost risks that might impact our work, to make sure that we included appropriate headwinds based on most likely impacts and that other factors were captured in our uncertainty estimates. We believe that in putting the plan together we used all information available to provide a realistic 50% confidence level estimate.

Currently our priority is on ensuring delivery of existing plans and being ready for CP6, including managing risks that have materialised since we developed our efficiency plans.

We acknowledge the ORR's view that additional efficiencies may arise later in the Control Period and agree that these should be re-invested in assets. The Route will work with STE during the Control Period to understand any potential for reducing scope (e.g. due to changes in policy). However, we are sceptical about the ability of further scope efficiencies being achievable beyond our exiting plans given that we are operating some of the oldest and poorest condition assets on the network. We have proposed an additional £7m challenge to be delivered through intelligent infrastructure initiatives noting that further development work is required in this area. We have received a further £37m stretch target. It should be noted that we do not currently have plans in place to deliver these efficiencies.

Group Portfolio Fund

We are supportive of the Group Portfolio Fund and the provision for Contingent Renewals. We also support the principle of the Route holding its own risk funding. We are working with the Centre to develop a framework for how this will work in practice within the new financial guidelines.

Detailed response

Train Performance

In our RSP in February 2018 we forecast train performance at 80% confidence in order to provide a level of performance that the Route was reasonably confident in achieving in return for the funding available. This was cognisant of the uncertainty around the implementation of the Thameslink Timetable (TT) and the systemic change to the operability to the network. As directed by the Draft Determination, we have revised our forecast to be based on a 50% confidence level.

Our priority has been to make sure that all assumptions remain valid and that our approach is consistent with that of other Routes. It must be noted that a 50% confidence level means that we are as likely to miss this target as we are to hit it. This should be recognised in terms of any regulatory action in the event that the target is not met.

It also needs to be remembered that train performance for the South East Route in CP6 is within the context of the most complex Route in the country (12 of the UK's 15 busiest flat junctions) with an asset portfolio that is in poor condition and continuing to decline in CP6 with Constrained Base Plan funding. The Route's asset base will remain fragile with an ongoing potential for low frequency, high impact failures, which are hugely detrimental to performance and damaging to the railway's reputation. The introduction of the full TT introduces a step change in complexity with increased train interactions and a significant increase in demand on the infrastructure (15.5% increase in forecast tonnage). Therefore, whilst we have increased opex expenditure in CP6, this competes with the significant increase in the capacity the network must support.

To revise our forecast in light of the Draft Determination direction, we have conducted assurance reviews on all assumptions from the bottom up to check validity and because there have been known changes to key original assumptions such as the May 18 TT implementation.

We have engaged with our customers to involve them in changes and seek their sign off on the approach, recognising they remain dissatisfied with the overall outcome. We have also engaged with the Network Rail National Performance Team (NPT) for advice on having a consistent approach to other Routes.

Our revised train performance forecast for the end of CP6 are 83.9% and 89.0% PPM for GTR and Southeastern respectively (please refer to graphs on pages 7 and 8). This equates to a CRM-P of 2.81. There remains significant uncertainty around the forecast driven largely due to the TT implementation and whilst lessons have been learnt on driver availability following May 18 TT, due to the limitations on the existing timetable we still do not yet know if the remaining assumptions will be valid. The impact of the recovery of the May 18 TT will remain within the system for some time to come. Uncertainty also exists due to franchisee changes for both Southeastern and GTR which could fundamentally affect our assumptions on TOC performance.

As previously communicated in our RSP, given the potential change to the operability of our Route following the implementation of the TT and re-franchising taking place for both of our customers, it is likely that train forecasts will need to be re-opened early in CP6. This will also require a re-calibration of Schedule 8 to avoid unreasonable risk to either the Route or our customers. We would welcome acknowledgment of this by the ORR.

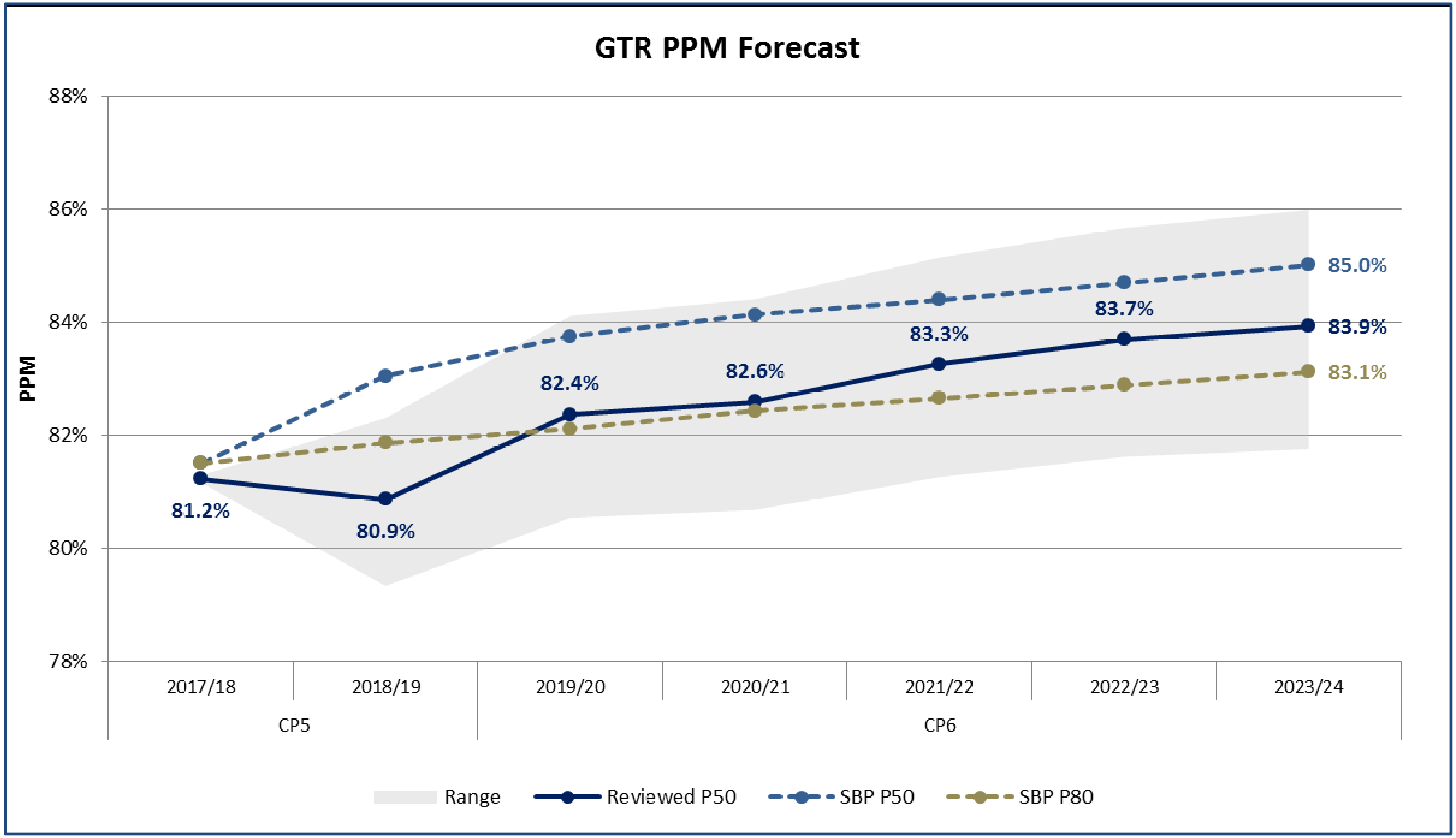
CRM-P floor

We are concerned that the potential reduction in the CRM-P floor from 30%, and the period on which this will be based, will result in regulatory action on a disproportionate basis and we are engaged with the Network Rail National Performance Team who will respond directly on this matter.

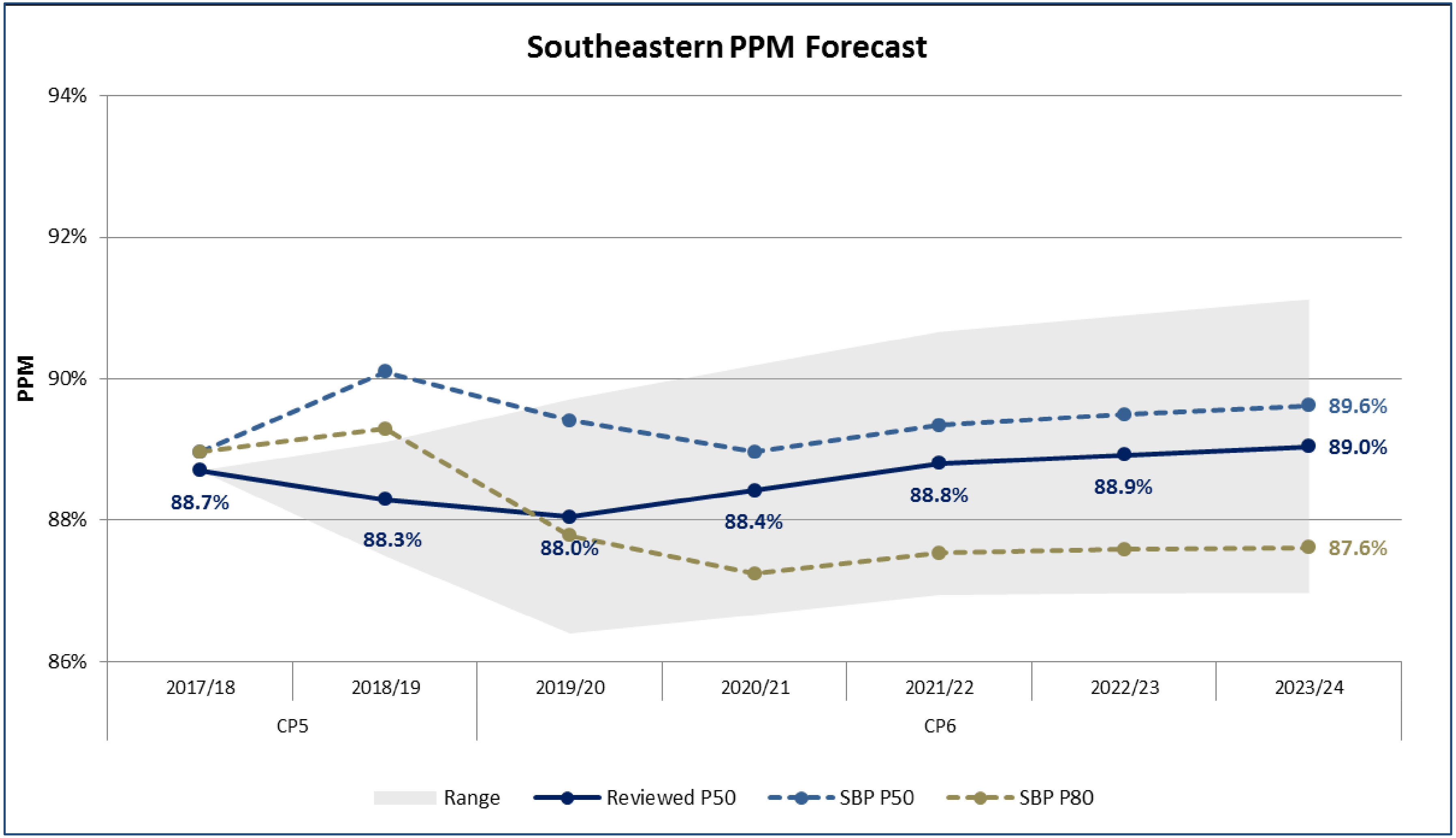
Sustained Poor Performance

We are concerned that the current Sustained Poor Performance (SPP) threshold at 10% is too readily triggered at 'normal' levels of performance fluctuation. Train operators for which SPP has been triggered have so far been unable to produce evidence to show that they are experiencing revenue losses over and above those provided for by the formulaic Schedule 8 payments, and hence no claims have been successful so far in CP5. Having such a high number of train operators being able to claim against Network Rail through the SPP mechanism, but being unsuccessful in doing so, creates a great deal of unnecessary industry rancour, and also wastes industry time and money in disputing SPP claims. This can often distract from important joint-industry initiatives, for example on performance improvement schemes. It is therefore important for all industry parties that the SPP threshold is set at an appropriate level for CP6, which is not too readily triggered but which also provides financial protection to train operators when Schedule 8 may not provide sufficient compensation, in periods of genuinely sustained poor performance.

We welcome ORR’s proposal to increase the SPP threshold to 25% for CP6, as we consider that this is the correct direction of change.



Revised GTR PPM forecast



Revised Southeastern PPM forecast

Asset sustainability

Approach to developing our Constrained Base Plan

Within our February 2018 RSP, our approach was to prioritise safety and compliance investment and then asset sustainability. In order to make sure that risk was optimally balanced within the constrained budget we developed a method to prioritise investment across asset classes and conducted risk based sensitivity analysis. This process is described in our RSP (page 41). An outcome of this process was a need to invest in safety compliance in electrical and plant assets and a significant proportional increase in investment in earthworks and drainage. The earthworks and drainage increase was on the basis of the risks remaining after the wettest winter on record in 2013/14 and a resulting shortfall in planned renewals in CP5.

- E&P – 44% increase on CP5
- Earthworks – 58% increase on CP5
- Drainage – 19% increase on CP5

This resulted in insufficient funding to address all sustainability risks across all assets and we developed Asset Sustainability Vision Schemes to address the unmitigated risks. In addition, schemes focussed on improving safety that were unaffordable within the Constrained Base Plan were packaged together within our improving Safety Vision Scheme.

Asset Vision Schemes and additional investment cases

These schemes are described below.

Track Sustainability - A plan to address the ballast with the highest used life in the country which will otherwise become unmaintainable in CP6 and leave an unrecoverable bow wave of asset renewals in CP7. In addition, Sussex PL and S&C have the highest used life nationally therefore this scheme also includes S&C, wheel timber renewals, heavy PL refurbishment and re-railing. Since our RSP submission, there has been a key change to the status of the High Output Ballast Cleaning capability due to access planning timescales and national allocation. This led to a need to submit a revised Vision Plan comprising of a shared HOBC volume with Wessex. Allowance has been made with an increased volume of heavy refurbishment delivered by a specialist undercutter supplier to maintain our drive to improve ballast used life and reduce Service Affecting Failures. We also have an increased volume of wheel timbers and are aiming to utilise FFU (polymer) replacements to significantly increase their lifespan. We also have an increase of S&C renewal due to Thameslink Resilience Programme loss of access and therefore volume. We retain CAT 2 re rail, although at a reduced level from our original vision submission.

Metallic Structures Sustainability - At present we are managing decline to the point of imposing traffic restrictions to structures and, ultimately will be signing structures out of use at the Constrained Base Plan level of intervention over time. This is evidenced by a number of traffic restrictions that have been imposed on the South East route over the last 2 years which continue to be in place. Undertaking proactive interventions on metallic underbridges over primary routes (Brighton Main Line and Charing Cross to Dover) will avoid future costs, reduce disruption and avoid a future bow wave of full renewal works. Analysis shows a financially positive case for investment.

A number of metallic structures have been surveyed using intrusive examination methods since the RSP submission. This has confirmed that the asset condition is worse than previously reflected by condition information based on visual examination alone. Significant corrosion to the web of the main girders has required restrictions to be imposed to allow safe running of trains. These include loco prohibitions, OPPOS restrictions and/or speed restrictions. While these could be managed, train performance is being affected and will continue to be affected until emergency/urgent repairs have been carried out.

Charing Cross Hungerford Bridge - Proactive intervention to mitigate the risk of closure of a bridge of nationally critical importance in supporting the link between Waterloo East and Charing Cross. Analysis shows that if the work is conducted in CP6, there is a financially positive case for investment avoiding future cost and disruption (equivalent to a positive Benefit Cost Ratio).

Intrusive examination has started on this major structure since the RSP submission and this has revealed corrosion of the bottom boom as well as other elements on this structure. Failure to address the defects may result in traffic restrictions being imposed and the structure will continue to degrade if preventative works are not carried out to address the deterioration.

Victoria Station – Sussex Concourse Roof - To renew the life expired Grade 2 listed roof at the UK's second busiest station, address the worst NRPS score of any managed station in the country and improve safety.

Improving Safety Vision Scheme - Whilst safety and compliance was the first priority within our Constrained Base Plan we also developed a package of work that would further improve safety but could not be afforded within the available budget. It contains asset investment to improve safety for the public, passengers and our workforce. It totals £63.5m and comprises:

- Level Crossings (£21.2m)
- Trespass and Suicide mitigation (£2.3m)
- Compliance: Electricity at Work Act - Stations (£15.9m)
- Passenger Safety (£14.1m)
- Workforce Safety (£10m)

We believe that within the prioritisation of any additional funding (Draft Determination Asset Sustainability £1bn and Safety £80m) the South East Route Improving Safety Vision Scheme should be included.

E&P - Within the available Constrained Base Plan funding, E&P funding was prioritised to address safety and legislative compliance requirements. Overall funding across all assets was prioritised based on managing the greatest risk, for example where there was a credible risk of having to close the railway for up to a week or more in CP6 without funding. This resulted in insufficient funding for asset sustainability focussed E&P investment and environmental risks posed by asbestos and ageing oil filled DC cables and HV switch gear remains unmitigated. Planned sustainability volumes fall significantly below STE modelled volumes. If further funding is available these risks should be addressed.

Asset Sustainability allocation and prioritisation

We are supportive of a transparent and evidence based approach to funding allocation that is focused on maximising risk reduction across the national network during CP6 and reflecting stakeholder needs. We think the initial allocation of the additional funding to the Route of £145m is not fully reflective of the relatively poor condition of our asset base.

Further to this, our allocation has since been reduced to £65.7m. Within this allocation, our highest priority would be to develop a reduced track High Output Balance Cleaner package of works, Package A in our Asset Sustainability Submission including targeted heavy refurbishment from Package B. This would broadly comprise a single year's campaign with the HOBC. As we would not be able to afford our Charing Cross structures scheme, we would prioritise the remaining funds to our metallic structures package A scheme. This summarised in the table below, the table is presented in priority order.

Funded Scheme	Net cost in CP6 (£m)	Estimate SE CSi (%)
Reduced Track High Output and heavy refurb (Track Sustainability Packages A and B)	45.0	0.247
Reduced Metallic Structure Sustainability Package A	20.7	0.211
Total funded	***65.7***	***0.458***
Un-funded Scheme	**Net cost in CP6 (£m)**	**Estimate SE CSi (%)**
Charing Cross Hungerford Bridge Package A	27.0	0.275
Remaining Metallic Structures Package A	7.3	0.074
Remaining Track Packages A and B	45.6	0.250
E&P Sustainability	33.0	*-
Metallic Structures Sustainability Package B	11.0	0.079
Victoria Station - Sussex Concourse Roof	49.0	0.248

Improving Safety and Compliance	63.5	*-
Track Sustainability Package C	8.8	0.059
Charing Cross Hungerford Bridge Package B	14.0	0.101
Total unfunded	***259.2***	***1.086***

Notes

We have had insufficient time to fully update the analysis associated with a funding envelope of £65.7m. The CSi values above are estimates.

*** E&P and Safety packages CSi analysis not available.**

Service Affecting Failures / CRI targets

Despite having some of the oldest, poorest condition and heaviest used assets in the country we have already achieved a 17% reduction in SAF in CP5. We have achieved this through Remote Condition Monitoring and a focus on train performance failure analysis. However, we are now seeing at the end of CP5 that further year on year improvements are very difficult to achieve. This year for example we are struggling to hit our current target of 2%

In CP6, we expect to see a step change in the usage of our infrastructure. The implementation of the Thameslink Timetable (TT) will see a 15.5% increase in tonnage and a significant increase to S&C movements which will further impact our track assets which in many categories are the oldest in the country.

We plan to mitigate the impact of this with increased maintenance volumes and response teams (note that response teams will primarily improve Delay Per Incident as opposed to reducing the number of failures) whilst developing our predict and prevent capability. Therefore, we believe that under this increased demand on our assets, holding broadly steady (we have a 1% target in CP6 year 1 before full TT implementation) is still a significant increase in actual asset performance that will be challenging to deliver. Furthermore, we will prioritise investment and interventions where it has most impact to passengers. Therefore, whilst this strategy is focussed on providing maximum benefit to passengers, it may in itself cause an increase in asset failures on lower criticality parts of the route. At this point in time, with the exception of any additional benefit from asset sustainability funding, we maintain our SAF forecast as per our RSP.

We are aware that STE is developing additional plans to target reductions in Service Affecting Failures and we will work with them to make the most of every opportunity.

Efficiency

The South East Route's efficiencies plans are already ambitious and challenge the Route beyond anything delivered in CP5.

We prioritised our Constrained Base Plan in terms of managing overall asset risks and also reduced renewals costs by de-scoping renewals where there was an element of scope targeting performance enhancements over and above the core renewal, for example within our major signalling renewals at Victoria.

During the development of the SBP we worked together with our deliverers and with national working groups to put together a challenging but deliverable portfolio of efficiencies. We developed a clear evidence base to our pre-efficient costs based on current rates. On top of these rates we set ourselves a challenge to deliver work 10.2% more efficiently (gross) by the end of CP6. We also assessed the main cost risks that might impact our work, including headwinds based on the most likely impacts and we have made sure that other factors were captured in our uncertainty estimates. We believe that in putting the plan together we used all information available to provide a realistic 50% confidence level estimate, in line with central guidance.

Our priority is on ensuring delivery of existing plans and being ready for CP6.

As CP6 approaches we are focusing on mobilisation to make sure that we can deliver year 1 and 2 volumes and that we can meet year 1 efficiency targets, as well as tackling current challenges around the timetable changes. We are developing milestone plans for our efficiencies and preparing to change the ways that we work to deliver additional volumes more efficiently. As we do this we are monitoring if there are new opportunities e.g. to reduce headwinds, and tracking additional risks that emerge.

We have been authentic in the development of our efficiency and headwind figures, which has required significant amounts of work between our Route teams and deliverers over the last 2 years. We believe that there is a risk that continuing to focus on the identification of new efficiencies in the short-term, rather than focussing on the delivery of our existing plans, could compromise the hard work done to date and undermining the deliverability of our plan.

We acknowledge the ORR's view that additional efficiencies may arise later in the Control Period and agree that these should be re-invested in assets. The Route will work with STE during the control period to understand any potential for reducing scope (e.g. due to changes in policy) however we are sceptical about the ability of further scope efficiencies being achievable beyond our existing plans given that we are operating some of the oldest and poorest condition assets on the network. We have proposed an additional £7m challenge to be delivered through intelligent infrastructure initiatives noting that further development work is required in this area. We have received a further £37m stretch target. It should be noted that we do not currently have plans in place to deliver these efficiencies.

Stakeholder engagement

In developing our Strategic Business Plan we ran an extensive customer and stakeholder engagement programme. We engaged 88 organisations and received 370 requirements for consideration in developing our plans. We are continuing this programme throughout this Draft Determination response period and more significantly plan to continue this through CP6 so customer and stakeholder requirements and views will be readily available to feed into CP7 plans.

Since the Draft Determination we have had a number of interactions with our customers both through routine activities such as the Southeastern Partnership Board, as well as specific sessions with Southeastern and GTR CP6 leads. We have had specific engagement in revising our Train Performance forecast with both customers. We have put plans in place to run stakeholder events in both Kent and Sussex in November of this year. Additionally, Southeastern has been running their own series of focus groups on the Draft Determination to develop their own response and we have been supporting these events.

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System Operator response to ORR's Draft Determination

31 August 2018

System Operator Planning a better network for you

Contents

Executive Summary

We welcome the Office of Rail and Road (ORR) assessment of the System Operator (SO) strategic plan, and the proposed decisions therein. The SO receiving its own settlement reflects the importance of our activity being widely understood and recognised within industry; separate regulation will support this and is fundamental to our plans.

Key messages

We consider the requirements set out by the ORR to be either in line with our strategic plan, or to be matters that we can reasonably make progress with as we develop our plans for CP6. We have outlined our plans to meet these requirements.

We recognise that it will be necessary to take account of the lessons learnt from the investigation into the May 2018 timetable change in the development of our plans for CP6. We anticipate that the steps set out in our strategic plan, and actions undertaken since, are likely to complement the lessons learnt. At this stage we do not consider that adjustments to the funding requirements within our strategic plan are required to enable the SO to take account of the lessons learnt.

We are accelerating our plans to strengthen our timetabling resources and capability as outlined in our strategic plan, and set out in ORR's letter to Network Rail dated 27th July 2018. This acceleration will not affect the expenditure requirements of the SO in CP6, and will be outlined further to ORR by 17th September 2018.

We anticipate continuing engagement with ORR and Transport Scotland to provide greater clarity of the roles and responsibilities in the implementation of the journey time improvement plans as required by the Scottish Ministers' HLOS.

In its draft determination, the ORR set out a number of requirements for the SO to deliver, namely to;

- report on its performance through the scorecard structure set out within our strategic plan;
- produce and publish an annual narrative report to explain elements of our performance which do not lend themselves to scorecard reporting;
- embed the external governance framework set out within our strategic plan;
- lead the development of a plan for journey time improvements that meets the requirements of the Scottish Ministers' High Level Output Statement (HLOS)
- implement the recommendations from the Nichol's review of our capital expenditure processes and controls; and
- take account of lessons learnt from the May 2018 timetable change.

We consider these requirements to be either in line with our strategic plan, or to be matters that we can reasonably make progress with as we develop our plans for CP6.

We will be setting out CP6 Year 1 scorecards for all three tiers (network-wide tier 1, directorate tier 2 and route tier 3) in our CP6 Delivery Plan, and welcome ORR's recognition that many of our outputs, and therefore associated measures, will be developed on an annual basis.

In our letter to ORR dated 24th May 2018 we set out our plans for engaging with our customers in order to develop an annual narrative report which is useful to them, and committed to reviewing both the structure and content of the report with our Advisory Board. We anticipate doing this in February 2019 to enable an annual narrative report to be published covering the 2018/19 financial year.

The inaugural meeting of the SO Advisory Board took place in July 2018. We plan to review the governance arrangements in advance of CP6, and welcome ORR's recognition that changes may be required to the framework over the control period, where supported by discussions with our customers and stakeholders and subject to the requirements of the managing change process.

Together with Route Business colleagues, we are working with the industry to develop plans for the ScotRail journey time metric and the freight average speed metric by 30th November 2018. We anticipate continuing engagement with ORR and Transport Scotland to provide greater clarity of the roles and responsibilities across the industry in implementing these plans.

As part of the ORR's assessment, we welcomed a jointly commissioned independent reporter study of our processes and controls supporting the capital expenditure programmes in our CP6 plan, undertaken by Nichols. An action plan outlining how we intend to develop and implement the recommendations arising from the review will be shared with ORR by 31st August 2018.

The proposed spending outlined within our strategic plan (£272m) includes the strengthening of our Capacity Planning team in support of the scale and complexity of timetabling activity we anticipate in CP6. We are accelerating our plans to strengthen our timetabling resources and capability as outlined in our strategic plan. This acceleration will not affect the expenditure requirements of the SO in CP6, and will be outlined further to ORR by 17th September 2018.

We recognise that it will be necessary to take account of the lessons learnt from the ongoing investigation into the May 2018 timetable change in the development of our plans for CP6. We anticipate that the steps set out in our strategic plan, and actions undertaken since, are likely to complement the lessons learnt. At this stage we do not consider that adjustments to the funding requirements within our strategic plan are required to enable the SO to take account of the lessons learnt.

ORR has published documentation as part of its draft determination proposing changes to the Network Rail licence, and also inviting views on the ORR's role in enhancements. Separate response documentation has been provided by Network Rail in relation to these proposals.

Detailed response

SO contribution to system safety

As the SO, we have a unique opportunity to drive improvements in system safety throughout the processes described in our operational model, through the quality of our work and the advice we provide to decision makers.

We welcome ORR's recognition of the vital contribution to the safety of the railway system that the SO can make through the embedding of safety considerations at the very beginning of the strategic planning process and throughout our end to end process.

In addition we will continue to focus on improving the health, safety and wellbeing of our people, our greatest asset.

Timetable planning in CP6

We recognise that the ORR's review has taken place in the context of a challenging period for the industry in respect of the May 2018 timetable change.

Within its SO draft settlement document, ORR set out a summary of issues relating to the implementation of the May 2018 timetable, noting that the SO plays a key role in timetable planning activities.

Although developed in advance of the May 2018 issues materialising, our CP6 strategic plan features the strengthening of our Capacity Planning team (constituting a 30% increase in operational expenditure compared to CP5) to support delivery of timetable production as we forecast both the volume of change and the complexity of the process to increase throughout CP6.

We are accelerating our plans to strengthen our timetabling resources and capability as outlined in our strategic plan, and set out in ORR's letter to Network Rail dated 27th July 2018. This acceleration will not affect the expenditure requirements of the SO in CP6, and will be outlined further to ORR by 17th September 2018.

We continue to contribute to the timetable inquiry, and recognise that lessons learnt should be reflected in our plans for CP6. We anticipate that such lessons are likely to span beyond timetable production, and indeed beyond Network Rail. As such, we anticipate our CP6 Delivery Plan taking account of those lessons and recommendations for which the SO can be reasonably accountable for.

We anticipate that the steps set out in our strategic plan, and actions undertaken since, are likely to complement the lessons learnt. At this stage we do not consider that adjustments to the funding requirements within our strategic plan are required to enable the SO to take account of the lessons learnt.

We also continue to evaluate the impact that recent decisions in respect of the December 2018 and future timetables will have on our plan, and this will form a feature of our engagement in the development of our CP6 Delivery Plan.

Requirements of the governments' HLOSs

Our strategic plan has been developed to reflect the requirements outlined within the governments' HLOSs. The Scottish Ministers' HLOS requires a number of specific outputs for which the SO is either directly accountable or will contribute to working with other areas of Network Rail, such as Route Businesses and FNPO.

Our plan therefore includes the creation of a whole industry project client capability within the strategy & planning team in Scotland, and maintains dedicated timetabling resource within Capacity Planning for timetabling activity in Scotland, as well specialist local knowledge for timetabling rural services. It also includes the availability, and minor variations to the availability, of cross border routes. Working with the wider industry, we are developing a depot and stabling capability plan.

ORR highlight that the SO will be accountable for leading the development of a plan for journey time improvements, working with other parts of Network Rail, which meets the requirements of Scottish Ministers. Further, ORR set out that the SO must work in cooperation with Scotland route to implement the plan.

Together with Route Business and FNPO colleagues, we are working with the industry to develop plans for the ScotRail journey time metric and the freight average speed metric by 30th November 2018. We anticipate continuing engagement with ORR and Transport Scotland to provide greater clarity of the roles and responsibilities across the industry in implementing these plans.

The accountability for the implementation of the plan will be multi-faceted not only within Network Rail (for example, opportunities from capacity planning and achieving linespeed improvements through the delivery of track renewals), but also beyond Network Rail. These accountabilities will include both operators (for example, by realising improvements to journey time in timetable and diagramming outputs) and Transport Scotland (for example, through its commitment to fund enhancement activity).

All these requirements will appear in the annual narrative report and the HLOS tracker which Network Rail proposes in support of the Scottish Ministers' requirements (appended to our Scotland response document).

Network Rail licence & regulatory asset base

In its overview of the regulatory framework for the SO, ORR set out an intention to make changes to Network Rail's network licence to reflect Network Rail's operating model. The regulatory approach that it is consulting on will require the SO to take on responsibility for complying with a number of licence conditions. In addition to the following policy level response covering SO areas, a detailed response has been provided by Network Rail in relation to these proposals.

- We are supportive of ORR's aims to better reflect the SO and to update the licence more generally to reflect requirements brought about by changes to the CP6 regulatory framework.
- We are supportive of the principle of embedding the role of the SO to reflect the regulatory approach for CP6, and seek to ensure that the mechanism of allocation does not unduly constrain the way in which we operate.
- We agree with the principle of independent-mindedness of the SO in order that it can fulfil these functions but would not welcome any inference that the SO was, or should be, distinct of Network Rail in CP6.

ORR indicate an opening value of £80m for the SO's regulatory asset base, which supports the value set out within our strategic plan. We welcome the outline provided within ORR's financial framework document setting out the approach used to determine this.

SO governance arrangements

The SO strategic plan set out its proposed governance arrangements, which ORR has welcomed within its draft determination. A detailed guide to the SO governance arrangements was published in January 2018.

The inaugural meeting of the SO Advisory Board took place in July 2018 and we have committed to review arrangements with the industry throughout January and February 2019. We welcome ORR's recognition that changes may be required to the framework over the control period, where supported by discussions with our customers and stakeholders and subject to the requirements of the managing change process.

We anticipate ORR will have full visibility of the proceedings of the Advisory Board, as well as envisage direct dialogue between the members of the Advisory Board and ORR as the need arises. It is anticipated that an early discussion between the ORR and the SO Advisory Board permanent chair will focus on how best to work effectively together.

Capital expenditure processes & controls

As part of the ORR's assessment, a jointly commissioned independent reporter study of our processes and controls supporting the capital expenditure programmes proposed in our CP6 plan was undertaken by Nichols.

This review found that there is already a good foundation of processes and controls for the effective management of the SO capex programmes for CP6, which comply with Network Rail investment regulations (a framework for making investment decisions). We support the recommendations to strengthen these processes and controls as outlined within the ORR SO draft settlement, and an action plan outlining how we intend to develop and implement the recommendations arising from the review will be shared with ORR by 31st August 2018.

Our progress in taking forward the recommendations of the independent reporter study will be discussed within the 2018/19 annual narrative report.

We recognise the description of these processes and controls as outlined within ORR's draft SO settlement document, but consider that there is some inconsistency created by ORR's description of the same controls in its Scotland summary document. We will continue to embed the processes and controls considered as part of this study and as described within ORR's draft SO settlement document, with investment decisions made in a manner which is consistent with Network Rail's investment regulations. This is outlined in the diagram at Appendix A.

We continue to develop our capex programmes, and will set out further details such as costs, and forecast milestones and benefits in our CP6 Delivery Plan.

SO reporting

The SO strategic plan set out the scorecard structure we propose, which is complemented by the production of an annual narrative report to discuss those areas which do not lend themselves to scorecard reporting.

ORR has highlighted the need for the SO scorecard structure to be embedded for CP6 to provide stakeholders with assurance that their priorities are being addressed. We have already implemented a two tier (network-wide tier 1 and directorate tier 2) scorecard framework in 2018/19. We will be setting out CP6 Year 1 scorecards for all three tiers (as before, but incorporating route tier 3) in our CP6 Delivery Plan, and welcome ORR's recognition that many of our outputs, and therefore associated measures, will be developed on an annual basis. These scorecards will be defined clearly for the forthcoming year, and will include a Financial Performance Measure displayed in a way which is consistent with Route Business scorecards as proposed by ORR (metrics will demonstrate variance to budget vice variance as a percentage of the budget).

We will continue to review and update our CP6 scorecards as required to reflect emerging stakeholder priorities and to reflect our planned outputs through consultation with our customers. Updating scorecards annually allows us to reflect current, shorter term priorities alongside long term priorities, as well as providing an opportunity to trial new measures as recognised by ORR.

Our route tier 3 scorecards will clearly set out measures developed with our individual customers to reflect their priorities, to enable us to monitor our delivery against their objectives. While these scorecards may not be directly comparable owing to the differing priorities of our customers geographically, they are likely to indicate opportunities both in structured continuous improvement and the sharing of best practice.

ORR has recognised that some requirements set out in the Scotland HLOS are not necessarily suited to being captured on the route or customer scorecards. Network Rail is developing a tracker to support scorecards, by which Network Rail, ORR and Transport Scotland can review progress against the HLOS requirements at quarterly tri-lateral meetings. There will also be opportunities to discuss progress at regular forums with customers for relevant measures. Supporting the HLOS tracker, we will implement a tier 2 scorecard for Scotland reflecting the reflecting our activities in support of the Scottish HLOS priorities.

In its scorecard and requirements supplementary document, ORR set out its proposals in respect of the measurement and reporting of Network Availability in CP6. We support ORR's position with regard to the abandonment of Possession Disruption Index metrics as a measure for Network Availability. Network Rail's response to ORR's scorecard and requirements supplementary document discusses our views on alternative ways of measuring Network Availability.

As our approach and the priorities of our customers will naturally evolve throughout CP6, we welcome ORR's recognition that changes may be required to the reporting arrangements over the control period, where supported by discussions with our customers and stakeholders and subject to the requirements of the managing change process.

In our letter to ORR dated 24 May 2018 we set out our plans for engaging with our customers in order to develop an annual narrative report which is useful to them, and committed to reviewing both the structure and content of the report with our Advisory Board.

To develop our 2018/19 report, we propose to further discuss the structure and topics of the report in support of our Delivery Plan consultations planned to occur throughout the summer and autumn 2018. We will consolidate our views following this engagement as a proposal for discussion with our Standing Advisory Group structure, before generating a final proposal for the structure and topics of the report for endorsement by the System Operator Advisory Board by February 2019.

Managing change in CP6

In its conclusions to working paper 8 – managing change affecting the PR18 settlements, ORR discusses three forms of change; changes to funding, organisation and outputs. In regard to the latter, ORR recognises that the SO plan must anticipate and react to the changing needs of stakeholders and funders, as much of our activity is driven by external issues such as franchise plans, and funding availability and mechanisms.

As described in the SO strategic plan and further within this response, our customers and stakeholders will be involved throughout the development of our outputs, consolidated in the metrics within the SO tier 1 scorecard on an annual basis.

This involvement ranges from the proposed approach to govern the Long Term Planning Process to the outputs defined within the Network Code Part D.

We anticipate the continued use of our existing customer and funder engagement practices throughout our operating model in the management of change to our outputs. This is described in further detail at Appendix B.

We would welcome continued engagement with ORR to ensure that there is sufficient clarity in the management of change to SO outputs in CP6.

People capability

To deliver on our plans, meet our customer and stakeholder expectations, and achieve our vision we recognise that we will require a high performing team of capable and engaged people, suitably sized to deliver our outputs.

In addition to the steps we are taking to support the health, safety and wellbeing of our teams, we set out further details of the competency frameworks which underpin the professionalisation of strategic planning and capacity planning capabilities to support the ORR's assessment of our strategic plan. Our CP6 Delivery Plan will outline our people strategy and development plans in further detail.

Stakeholder engagement

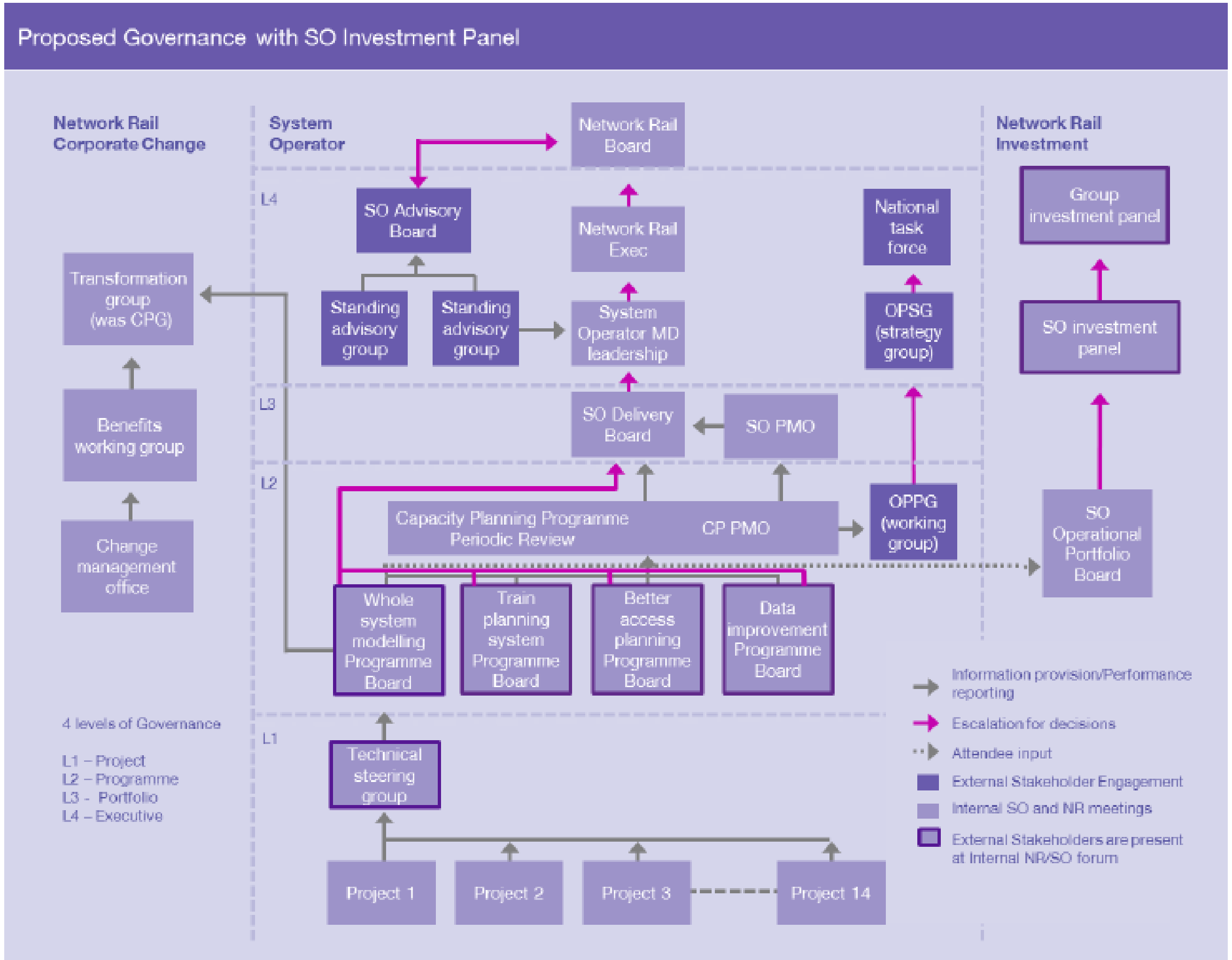
In its SO draft settlement document, ORR set out its assessment of the SO's engagement with stakeholders to develop its strategic plan.

This assessment recognises the diverse customer base of the SO, which features all train operating customers, route businesses, infrastructure managers, and funders, as well as stakeholders such as local authorities, user groups and local enterprise partnerships.

We recognise the opportunities to improve our stakeholder engagement set out within ORR's assessment. Further details of Network Rail's proposals to improve stakeholder engagement are set out in our stakeholder engagement response document.

Appendices

Appendix A: Processes & controls for SO capital expenditure programmes (incorporating independent reporter recommendations)



Appendix B: Proposals for the development and change of SO outputs

Output	How is our activity established?	What is measured?	Where is this measured?	How would it be changed?	Customer involved
Continuous Modular Strategic Planning	Proposed LTPP Governance framework which oversees the development of a CMSP annual plan	Milestones delivered against the approved annual CMSP plan.	Tier 1 Scorecard – network wide Disaggregated to Tier 2 and 3	LTPP Governance framework	✓
Project Development	Bilaterally with the relevant funder. DfT & TS portfolio overseen by the relevant Portfolio Board.	Milestones established with the relevant funder as part of progression through the relevant decision framework throughout the year.	Tier 1 Scorecard – network wide, with some priorities indicated specifically Disaggregated to Tier 2 and 3	Formal change control to milestones agreed with the relevant funder.	✓
Franchising	Bilaterally with the franchise authority or concession authority.	Milestones established with the relevant franchise or concession authority.	Tier 1 Scorecard – network wide Disaggregated to Tier 2 and 3	High likelihood of extra-SO change led by the franchising or concession authority.	✓
Event Steering Groups	Calendar of Events process established in Network Code Part D. Project plans approved at relevant ESG	Milestones established with the relevant ESG, as and when formed to an appropriate level of maturity.	Tier 1 Scorecard – network wide Some disaggregation to Tier 3 where a priority for Routes/TOCs	Calendar of Events process established in Network Code Part D includes regular review. Changes to Part D possible through the Class Representatives Committee. Change to plans at relevant ESG meeting.	✓
Working Timetable	Part D requirements	Milestones reflective of the key dates in Network Code Part D	Tier 1 Scorecard Tier 2 Capacity Planning Scorecard	Changes to Part D possible through the Class Representatives Committee.	✓

Output	How is our activity established?	What is measured?	Where is this measured?	How would it be changed?	Customer involved
Amendments to the Timetable	Part D requirements	Milestones reflective of the key dates in Part D.	Tier 1 Scorecard Tier 2 Capacity Planning Scorecard	Changes to Part D possible through the Class Representatives Committee. Target performance levels changed by endorsement of the OPSG.	✓
Improvement initiatives	Approval of programme milestones at Programme Board & Delivery Board	Milestones established and ratified through the relevant Programme Board for capital expenditure programmes which includes industry representatives. Non capital expenditure improvement initiatives undertaken within the System Operator through relevant governance.	Tier 1 Scorecard Tier 2 P&P Scorecard	Changes to milestones via Programme Board & SO Delivery Board. Changes to programme costs managed through SO Delivery Board.	✓ for capital expenditure programmes
Performance of the Timetable	Performance levels established through dialogue with the OPSG and presented to the SO Advisory Board through the Tier 1 Scorecard.	Delay incidents and minutes associated with timetable planning	Tier 1 Scorecard – network wide Disaggregated to Tier 2 and 3 (where considered a priority)	Dialogue with the OPSG and through review with SO Advisory Board	✓
Customer advocacy	Performance levels established through dialogue with the Standing Advisory Groups and presented to the SO Advisory Board through the Tier 1 Scorecard.	Customer advocacy of SO services measured through surveys	Tier 1 Scorecard – network wide Disaggregated to Tier 2 and 3	Dialogue with the Standing Advisory Groups and through review with SO Advisory Board	✓

Response to ORR's Draft Determination – Wales Route

31 August 2018

Contents

Executive Summary

I am encouraged in the support from the ORR in our Route Strategic Plan and the recognition of the improvements that have been made in the planning process, robustness and ownership of our plan for CP6. The Route has considered the findings of the draft determination and is keen to respond to these challenges to further refine our plans.

Since the publication of the draft determination in June 2018 we have extensively reviewed our plans to identify opportunities to meet the challenges to key aspects of our plans which are summarised below.

Sustainability & Safety – The Route notes the ORR's challenge to invest further in renewals interventions to improve both asset sustainability and safety at level crossings.

We have returned to our plans and identified targeted schemes that will result in significant improvements in sustainability within CP6. This investment will be further complimented by central initiatives such as Intelligent Infrastructure and new technology delivered through research and development.

Safety investment has been developed that will improve the safety at an additional 41 level crossings and provide development funding for challenging closures of key crossings in future control periods. This investment will improve the safety of the public that use these crossings and will also reduce train accident risk at these locations.

Performance –The Route has made good progress in working jointly with KeolisAmey and TfW since the franchise was awarded at the start of June and have held a workshop to explore the assumptions driving the CP6 trajectory alongside gaining an understanding of the franchise specifications, plans, metrics and trajectories.

The Route does not agree with some of the observations made in the ARUP independent review referenced within the Draft Determination. Although the review states there is confidence in the process undertaken to determine trajectories, these trajectories have been rated as the least ambitious and stretching. It is unclear on the process undertaken to determine the level of challenge of each TOCs trajectory in ARUPs review and unclear whether all the information presented during the reviews has been considered.

Efficiency – Since the publication of the Draft Determination in June 2018 work banks have been reviewed and workshops have been held to identify opportunities to build more efficiency into our plans post submission of our Route Strategic Plan at the start of 2018.

These reviews have looked at a number of material changes that have occurred over that timeframe, and include challenges we have put upon ourselves as a business resulting in a projected increase in efficiency of £29.1m increasing our overall efficiency to 5.7%.

Stakeholder Engagement- The Route acknowledges the feedback from the ORR and recognises the need to build on stakeholder engagement to date and provide stakeholders with the opportunity to comment on proposed updates to the plan. The Route will utilise existing forums and carry out additional workshops where required to ensure the views of TfW, Welsh Government, passengers and local authorities are fully captured.

Core Valley Lines - In June 2018, Transport for Wales awarded a rail services grant to Keolis Amey to provide services across the Wales & Borders franchise geography. The franchise is the primary passenger rail customer for Wales Route.

We have been working with Welsh Government to understand its proposals to invest in the Core Valley Lines (CVL) North of Cardiff. Welsh Government's proposed acquisition of the CVL is a very significant aspect of the 15-year grant agreement; the commercial terms, extent and nature of this divestment are still being negotiated.

As the winner of the procurement was announced on 4th June 2018, the Route's Strategic Business Plan could make few assumptions regarding the new grant agreement. The impact of the procurement on the Route is still being evaluated at the time of writing.

Once the impact of the new rail services is understood, the Route will engage with ORR to ensure the principles and methodology of change control are established in an agreed framework to give transparency to all our stakeholders.

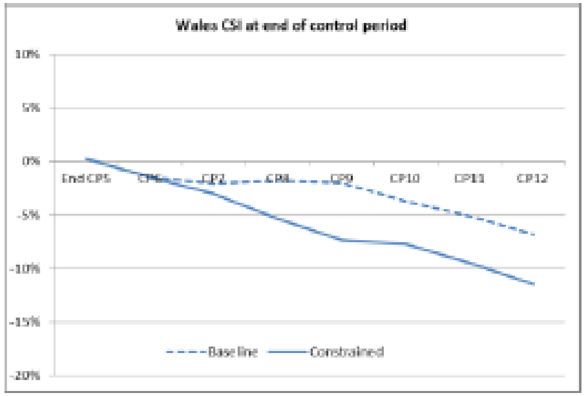
Bill Kelly
Route Managing Director (Acting)

Detailed response

Asset sustainability

Wales Route is encouraged by the support from ORR to invest further in renewals interventions to improve asset sustainability.

Current forecasting included within our 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. The majority of the schemes were taken from within part 2 of Appendix D (additional investment opportunities) within our submission earlier this year.

Track interventions are focused upon:

1. The removal of obsolete components
2. The removal of significant proportions of jointed track which will not only improve sustainability and ride quality but will also change maintenance techniques which aligns well to the traffic aspirations of the new franchise.

Earthworks interventions are focused upon:

1. Targeted upgrades of lower tier interventions where prior funding constraints did not permit longer term interventions and; an overall increase in refurbishment interventions across both soil cuttings and embankments.

ID	Name	Net cost in CP6 (£m)	Route	E&W	National	
PCCAR	Pipe & Catch pit Cardiff refurb	0.5				Drainage not included.
PCSWA	Pipe & Catch pit Swansea refurb	0.2				
PCHER	Pipe & Catch pit Hereford refurb	0.3				
PCSHR	Pipe & Catch pit Shrewsbury refurb	0.5				
DCAR	Ditch Cardiff refurb	0.4				
DSWA	Ditch Swansea refurb	0.7				
DHER	Ditch Hereford refurb	1.0				
DSHR	Ditch Shrewsbury refurb	0.7				
	Total	4.2	0.000%	0.0000%	0.0000%	
TRA1A	North Wales Obsolete Components Ph 1	5.0	0.041%	0.0028%	0.0024%	
TRA1B	North Wales Obsolete Components Ph 2	3.8	0.031%	0.0021%	0.0018%	
TRA3A	Wrexham - Bidston SSR Ph 1	4.5	0.035%	0.0024%	0.0021%	
TRA3B	Wrexham - Bidston SSR Ph 2	4.5	0.035%	0.0024%	0.0021%	
	Total	29.3	0.248%	0.0171%	0.0147%	
GEO1	Upgrade of existing RSP schemes	8.4	0.162%	0.0111%	0.0096%	
GEO2	Embankment Refurbishment	5.4	0.206%	0.0141%	0.0122%	
GEO3	Cutting Refurbishment	8.9	0.139%	0.0095%	0.0082%	
	Grand Total	45	0.649%	0.045%	0.038%	

The investment is modelled to have a significant 0.649% improvement in sustainability.

Although this activity doesn't take the Route to a sustainable position, it does provide greater opportunity to further close the gap through the release of the Route risk allocation to invest in further activity included within Appendix D of our RSP.

Central analysis shows that the majority of this gap will be closed over the next two control periods through life extension and reduced activity costs that will be supported by new technology delivered through research and development.

Full details of the sustainability proposals are included within the routes detailed response in July 2018.

Safety expenditure

The opportunity to invest further into level crossings risk reduction, a key safety concern for the Wales Route is welcomed. To meet the challenges posed by the ORR the Route now proposes to include the additional expenditure cited within part 2 of Appendix D which included:

1. Vehicle closure of Harlescott OD level crossing in CP6 through the construction of footbridge with full closure planned in early CP7.
2. CP6 development fund to progress closures of high risk sites within the Route. These are sites that require significant planning and investment that spans more than a control period to reach a point where closure can be achieved.
3. Risk reduction on 41 passive vehicle / 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. Where crossings remain we will upgrade to overlay miniature stop light at suitable locations.

The development fund includes five strategically important crossing closures across the Route and combined with the works planned at Harlescott will lead to a future FWI reduction of 0.076.

The 41 locations identified at the time of writing for passive crossings are detailed below and represent a FWI reduction of 0.034.

DJP x 3 Parsel Lane Cae Daniel Gellerts Farm	LLA x 3 Ffos Fach Isaf Ynys Uchaf Tal-y-Cynllwyn
CNH3 x 5 Pen Uchaf and Ty Gwyn (diversion & Vamos) Glan-y-Mor Elias Wig Farm Bondonleb Fishpool Farm	HNL1 x 5 Llancillo Hall Vineyard Farm 1 Vineyard Farm 2 Howton Court Brewers 1
SYC x 1 Cronkinsons and Cronkinsons Farm (diversion & Vamos)	NAB x 2 Nant-y-Cafn Tir Isaf 1
SHL x 6 Lower Burton Farm Feltons Cross Brook Farm Broad Farm 1 Micklewood 2 Blackpole Farm	SBA2 x 6 Malt House Glanhafren Ty mawr Farm Upper Llegodig Parry Green Coed y Dinas
CWL2 x 2 Ty Ddu The Hall Farm 3	SBA1 x 2 Smiths Hanwood
SWM x 6 Sharpes Curb Hut Bragty Penrhiwtyn Gwyn Y Gaer Gorsecoch	

Should the identified sites be found to be unsuitable for this technology an additional 13 contingent sites have been identified across the route.

Full details of the safety proposals are included within the routes detailed response in July 2018.

This additional funding will improve the safety of both passengers and the general public at these locations within CP6, and will also enable the Route to tackle some of the more challenging level crossing closures within future control periods.

Efficiency

Since the publication of the Draft Determination in June 2018 work banks have been reviewed to identify opportunities to build more efficiency into our plans post submission of our Route Strategic Plan at the start of 2018.

This review has focused upon the following key changes to our submission since publication of the ORR draft determination:

1. The increase in renewals funding to target sustainability within the Track, Earthworks and Drainage work banks.
2. The impact of additional expenditure on level crossings to the signalling work bank.
3. The movement of a greater proportion of risk funding to be held within the Route.
4. Changes since the start of the year to external factors that financially impacted upon the Route Strategic Plan.

Asset sustainability funding

Targeted increases have been made to improve sustainability, and in addition to the benefits that this will bring in this area, it will also provide opportunities to increase efficiency. Key areas identified have been through economies of scale, greater contractual negotiating powers and the opportunity to extend campaign style delivery. These impacts have been considered, and have resulted in an additional £2.1m of efficiency that has been included within our plan.

Level crossing safety funding

The addition number of level crossings that the Route are now able to include within our work bank for closure / overlay installation have resulted in an additional £0.5m efficiency to be included within the Signalling work bank. It is calculated that the additional volume now held within the plan will support a more geographically efficient delivery model that combined with the economies of scale for the technology used will realise the efficiencies proposed.

Route held risk allocation

The Route has reviewed headwinds within our plan in light of the greater allocation of risk funding suggested within the draft determination. Where it has been felt that it would be appropriate to draw down upon this risk allocation our headwinds have been either reduced or removed completely resulting in a £6.5m contribution to our overall Route efficiency position.

Change to external factors

There have been a number of slight changes to large planned schemes due to be constructed within CP6. These changes have enabled the Route to reflect this within some of our headwinds related to Contractor supply and demand.

Efficiency Challenge

An additional £20m scope efficiency challenge has been created within the route based upon as yet undefined opportunities to be released through Intelligent Infrastructure (II) development, targeted Research and Development (R&D) projects and Open for Business standard reviews.

To maintain stability within the early years of CP6 these efficiency’s have been forecast for delivery within years 3, 4 and 5 of the control period by which time the benefits of these initiatives are anticipated to be realised.

Performance

The Draft Determination recognises the requirement to review performance trajectories following the recent award of franchise and notes our engagement with TfW on determining trajectories based on information available. The Route does not agree with some of the observations made in the ARUP independent review referenced within the Draft Determination.

Although the review states there is confidence in the process undertaken to determine trajectories, these trajectories have been rated as the least ambitious and stretching. It is unclear on the process undertaken to determine the level of challenge of each TOCs trajectory in ARUPs review and unclear whether all the information presented during the reviews has been considered.

The Route provided an overview of the analysis at the review that determined our trajectories submitted were both challenging and deliverable. This was based on a statistical forecast to determine confidence ranges along with an understanding of current trends and issues which present a challenge to current train performance in the context of past performance levels, whilst not having sight of TOC improvement plans to address these issues.

The Route would welcome clarity on the rationale for deeming the trajectory as the least ambitious / stretching and the opportunity to provide further information if required to understand the difference in views prior to the Final Determination. Understanding this gap in views is critical to the Route as this process is planned to be used in defining the changes to the performance trajectories as the new franchisee TOC plans are better understood.

The Route has made good progress in working jointly with KeolisAmey and TfW since the franchise was awarded at the start of June. This involved holding several workshops to explore the assumptions driving the CP6 trajectory alongside gaining an understanding of the franchise specifications, plans, metrics and trajectories.

The next steps planned involve a detailed review of respective models to compare the impact of plans in a common measure, Average Minutes Lateness (AML). This will determine whether there is a requirement to refresh the submitted trajectory.

This work will involve determining a common modelling methodology, a refresh of impact assessments for both NR and TOC plans along with a refresh of traffic growth assumptions based on franchise specifications. The latter will require a refresh of the national traffic growth forecasting tool and the Route is working with central support functions to secure this resource.

Due to the scale of work involved, the Route is aiming to refresh the performance trajectories to inform the 19/20 scorecard target setting. This is dependent on securing resource to update national business plan models, taking account of updated traffic growth assumptions, and the effects of CVL divestment on the wider plan.

Stakeholder engagement

The Route welcomes the feedback by the ORR on the scope and methods of stakeholder engagement. The Route acknowledges the positive feedback on the approach taken in terms of the range of stakeholders engaged with and the fact that the Wales RSP listed the stakeholders and explained the purpose and content of the workshops held. The Route accepts that stakeholder views were mixed on the effectiveness of the workshops and on the level of information received.

Feedback on the lack of clarity in the RSP around how passenger priorities were taken into consideration is appreciated. The Route also acknowledges comments around the need to explain in greater detail how engagement influenced the Route's plans for CP6 and the need to provide a greater line of sight between stakeholder priorities and the actions in the RSP.

We plan to build on the existing stakeholder engagement carried out to date, taking on board the ORR's feedback. We will include Transport Focus, Transport for Wales and the Welsh Government, utilising our established stakeholder forums as well as organising additional workshops were necessary to ensure we engage with all key stakeholders including local authorities and key rail user groups across the Route. The Route's objective will be to provide an opportunity for stakeholders to comment on the proposed updates in the plan.

Group Portfolio Fund

We welcome that ORR's Draft Determination accepted the total value of funding for CP6 financial risk (the 'Group Portfolio Fund') of £2.6bn. We also note ORR's proposed changes to the governance of this funding. We have worked with Group Finance to develop revised governance arrangements for the three categories of risk funding, which reflect ORR's draft decisions.

As the majority of risk funding will be held in routes, we will now be responsible for managing all financial risk in our route plans, except those that are truly exceptional. We are continuing to work with Group Finance to agree the detailed arrangements associated with the budgeting for, and use of, the Group Portfolio Fund in CP6.

Sustained Poor Performance

Network Rail is concerned that the current Sustained Poor Performance (SPP) threshold at 10% is too readily triggered at 'normal' levels of performance fluctuation. Train operators for which SPP has been triggered have so far been unable to produce evidence to show that they are experiencing revenue losses over and above those provided for by the formulaic Schedule 8 payments, and hence no claims have been successful so far in CP5. Having such a high number of train operators being able to claim against Network Rail through the SPP mechanism, but being unsuccessful in doing so, creates a great deal of unnecessary industry rancour, and also wastes industry time and money in disputing SPP claims. This can often distract from important joint-industry initiatives, for example on performance improvement schemes. It is therefore important for all industry parties that the SPP threshold is set at an appropriate level for CP6, which is not too readily triggered but which also provides financial protection to train operators when Schedule 8 genuinely may not provide sufficient compensation, in periods of genuinely sustained poor performance.

We welcome ORR's proposal to increase the SPP threshold to 25% for CP6, as we consider that this is the correct direction of change.

Research and Development

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

CP6 Preparations

The Wales Route team are currently undertaking access planning, workbank authorisation, and maintenance planning activities in preparation for the start of CP6. Through the RAMP processes we are aligning workbanks across a broad asset portfolio, to ensure the best utilisation of access to our infrastructure. The requirements of all major works in CP6 year 1 are well under way and authorisation of these works will be sought well in advance to ensure the planning of work is both safe and efficient.

Other route specific issues

In June 2018, Transport for Wales awarded a rail services grant to Keolis Amey to provide services across the Wales & Borders franchise geography. The franchise is the primary passenger rail customer for Wales Route.

The grant agreement was procured in a different manner to a DfT franchise: Network Rail was able to assess bidders' timetables on a line-of-route basis and infrastructure proposals, but was not able to be involved in TfW's specification of the train service. Network Rail has been working with Welsh Government to understand its proposals to invest in the Core Valley Lines (CVL) North of Cardiff. Welsh Government's proposed acquisition of the CVL is a very significant aspect of the 15-year grant agreement; the commercial terms, extent and nature of this divestment are still being negotiated.

As the winner of the procurement was announced on 4th June 2018, the Route's Strategic Business Plan could make few assumptions regarding the new grant agreement. The impact of the procurement on the Route is still being evaluated at the time of this response to the Draft Determination.

It is critical that the Route, the ORR, Transport for Wales and other stakeholders acknowledge that significant change control will need to occur early in CP6 to reflect at least the following anticipated changes:

Core Valley Lines

- The impact of the divestment of 82 miles of railway on regulated outputs and funding requirements for Wales Route
- Potential changes in the number of staff in the Route if roles are transferred to the new Core Valley Lines business
- Potential changes to the locally agreed Route Scorecard
- Potential changes to train performance outputs
- Potential changes to aggregated national commitments
- The impact of a new interface between the Route and a third party railway with regular services between the two networks

Wider route geography

Incremental timetable changes over the course of CP6 required by the grant agreement, with particular attention to the December 2019, 2021 and 2023 change dates

- The impact of these changes on efficient access to the rail infrastructure for maintenance and renewal activities
- The impact of these changes on track access income
- **The current procurement of a full replacement train fleet over CP6, with resultant impact on various assets**
- A move from PPM to Passenger Time Lost performance measures

The Route wishes to work extensively with the ORR to understand the principles and methodology of change control so that once the impact of the new rail services are understood there is an agreed framework that gives transparency to all our stakeholders.

Wessex response to ORR's Draft Determination

31 August 2018



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Contents

Executive Summary

Wessex response to the ORR Draft determination key points:

- Wessex work closely with SWR and other operators on performance trajectory to ensure mutual on going understanding
- Wessex welcome the proposal for more sustainable interventions, especially important in Track and Earthworks, but recognise the efficiency challenge that it represents
- The funding mechanism for major works on the Isle of Wight represents a financial risk to Wessex CP6 plans

This document forms the Wessex Route response to the Wessex CP6 route strategic plan draft determination issued in June 2018.

Wessex welcomes the ORR CP6 Draft Determination and the opportunity to secure a higher settlement than in CP5. We have carefully reviewed it and developed key points of importance to be taken into account in the final determination whilst we carry on refining our plans.

Asset sustainability

The Wessex CP6 submission in February 2018 was constrained by the funding envelope, rather than deliverability. Within this constraint it was clearly recognised that long term sustainability was compromised in order to maintain levels of performance and safety in CP6. The substantive trade off was from other assets to prioritise Feltham Area re-signalling - a condition-related, and safety-risk driven renewal, deferred from CP5. Track was the significant area of reduction.

This trade off was recognised in STE advice to Excom in January 2018, which clearly identified Track having a large gap with modelled volumes and therefore an unsustainable asset portfolio condition. Packages of work totalling up to £83m have been identified to narrow this gap and improve the Track sustainability, as well as the Earthworks asset condition profile, which contains a large number of deferred renewals.

Safety

Our Safety plan is built around delivering safe assets and maintaining asset integrity. The rollout of 'faster safer isolations' provides our staff with a significantly safer workforce environment, whilst standardised possessions provide the opportunity to increase production as well as reviewing our access points in terms of location and facilities.

Through our CP6 level crossing risk reduction proposals we plan to reduce FWI by 25%.

We aspire to reduce LTIFR to 0.17 by the end of CP6. To deliver this we are investing in our workforce; improving accommodation, education and culture.

Efficiency

Wessex appreciates the challenge raised on efficiencies and headwinds forecast and has thoroughly reviewed plans and assumptions made in the February 2018 submissions. Whilst we have identified potential opportunities that will need to be confirmed over the next few months, and are looking into decreasing headwinds; scope efficiencies have been exhausted through the earlier process of constraining our plans.

Opex efficiencies are stretching and reviewing assumptions has confirmed that they cannot be increased any further. The majority of the cost increase compared to CP5 is driven by structural changes, with very limited headwinds. Other than fatigue management assumptions, none can be improved at this stage.

Performance

Network Rail and South Western Railway (SWR) have been working together in an alliance since August 2017 when SWR took over the Franchise. The alliance is made up of four areas of joint working which include the performance function meaning that there is a single head of performance for both NR and SWR.

Analysis and forecasting has been carried out by both the NR head of reporting and analysis and the joint performance team with exec level conversations led by the Route Finance Director for NR and the Director of performance and planning for SWR. Specifically in response to the ORR challenge on Historical trend, additional details and analysis has been shared and discussed with Arup and SWR (see Performance evidence pack), and the meeting set up with ORR in August 2018 addressed any remaining questions.

The main challenge is that the CP6 exit point is 5% below that specified within the SWR franchise.

Both SWR and NR agree that it is unlikely the gap in exit position for CP5 can be closed. Both SWR and NR agree that the CP5 exit position of 86.5% is not possible, and have agreed that 83.7% is a more likely outcome given current levels of performance and associated plans. In order to support delivery of this the Waterloo International Terminal (WIT) should be opened in December 2018 regardless of whether the timetable change goes ahead to provide additional resilience. It is also noted that we need to do more, working jointly with SWR, in order to deliver the 83.7% or more.

NR and SWR have agreed to disagree on the target PPM levels (given their franchise commitments to the DFT) but engagement has been constructive and is on-going and current forecast for CP6 exit is 87.5%.

We welcome ORR's proposal to increase the SPP threshold to 25% for CP6, as we consider that this is the correct direction of change.

Isle of Wight major works funding

The Island Line falls under different franchise terms and conditions from the rest of SWR. A key assumption set out in the Route SBP submission was that this was excluded from the determination. Ryde pier will need renewal within the control period at a cost of c£40m. This additional risk of spend has now been included within the Route plan pending a decision identifying a funding source.

Stakeholder engagement

We continue to engage with our key stakeholder groups, namely the LEPs and councils on rail system requirements and with train operators on performance and operational timetable. We recognise the need to co-ordinate and align the communication plans and to capture and manage stakeholder needs across the many people involved in the stakeholder engagement. We have the commitment of our communications, system operator, route asset management and business development teams in working on a stakeholder engagement strategy to achieve this.

In parallel, we have also started working on a wider stakeholder engagement strategy, which will include a stakeholder map and timelines that we can share with our stakeholders and increase visibility of engagement activities.

Service Affecting Failure

Wessex Route has managed asset reliability carefully in CP5 and SAF has dramatically improved in the first half of CP5, with Wessex seeing the best improvement in CRI (Composite Reliability Index) of all Routes. Although the rate of improvement is slowing down, it is still improving towards the end of the control period. In order to consolidate the great achievements of CP5, Wessex proposes to maintain a realistic and steady level of continuous improvement thereafter of 1% year on year.

Group Portfolio Fund

Noting the ORR's conclusions, we are working to confirm our expenditure profile following our detailed planning of our renewals activities, the level of financial uncertainty, and the detail behind how the release of the fund for cancellable renewals would work.

Research and Development

ORR's Draft Determination proposed cutting the funding for Research and Development (R&D) from £440m to £100m. Our R&D function proposes to retain a funding of £245m with an additional matched funding budget which would be more appropriate of an organisation of the size of Network Rail. The CP6 SBP has illustrated the difficulty of maintaining a plan that delivers safety, performance and sustainability with an ageing infrastructure. We support an increased R&D funding to facilitate a step change in the way we manage our assets efficiently.

CP6 readiness

Wessex Route has developed readiness indicators and a milestones plan in addition to the Central indicators in order to monitor progress early on.

Detailed response

This document forms the Wessex Route response to the Wessex CP6 route strategic plan draft determination issued in June 2018.

Wessex welcomes the ORR CP6 Draft Determination and the opportunity to secure a higher settlement than in CP5. We have carefully reviewed it and developed key points of importance to be taken into account in the final determination whilst we carry on refining our plans.

Asset sustainability

The Draft Determination stated the need for Network Rail to dedicate a greater part of its plan to sustainable interventions. The Wessex CP6 submission in February 2018 was constrained by the funding envelope, rather than deliverability. Within this constraint it was clearly recognised that long term sustainability was compromised in order to maintain levels of performance and safety in CP6. The substantive trade off was from other assets to prioritise Feltham Area resignalling - a condition related, and safety risk driven, renewal deferred from CP5. Track was the significant area of reduction.

This trade off was recognised in STE advice to Excom in January 2018, which contained the following summary of chief engineer assessments of key activity levels.

Minimum Activity Overall Rating	Track	Signalling	Level Crossing	Structures	Earthworks	Operational Property	Electrical Power	Telecomms	Tunnels	Drainage
Anglia										
LNE & East Mids										
LNW										
Scotland										
South East										
Wales										
Wessex										
Western										

Key: *Assured activity levels are at or above STE minimum activity guidance*

Activity levels are below minimum activity guidance, however the chosen work mix and related mitigations through maintenance addresses the shortfall.

Activity levels beneath STE minimum guidance. Further mitigation required to address risks.

*For **Track,** observed shortfalls in Wessex have arisen from prioritising activity in Signalling renewals. Wessex have increased maintenance activity and other mitigations to compensate. The Wessex track asset is a priority candidate to draw from Risk and Contingency funds to invest further in track.*

The key component of our £83m proposal for additional packages to improve sustainability is to reinstate planned track volumes that were removed as part of the SBP planning process to narrow the deficit in long term sustainable track volumes (see App A for *Effective renewal per year in CP6 by route* chart).

This is consistent with the emerging conclusions of Sir Michael Holden’s review on behalf of the Secretary of State into performance on the South Western Railway.

Deliverability

All of the activities proposed within these packages were included in the original Wessex CP6 deliverable submission. They were later removed for affordability reasons. Deliverers and access planning have been carefully consulted and confirm that the assumptions on deliverability at the time of the original submission are still valid. The work is forecast for years 3-5 of CP6 when work in the submitted SBP declines. This timescale allows for EAS negotiations for possessions as per standard process, development of track works to GRIP4TRACK timescales and gives sufficient notice to increase supply resource where necessary. Earthworks works are not forecast to require significant disruptive access.

CP6 readiness

Wessex Route has developed readiness indicators and a milestones plan in addition to the Central indicators in order to monitor progress early on.

Safety expenditure

Our level crossing plans programme addresses risk at the most critical locations through closure and improvement reducing FWI risk across the Route by 25%. We continue to work closely with Poole Council to support them to develop plans to allow the closure of Poole High Street Level Crossing.

We have made provision for driver / worker safety in depots through the continuation of our bespoke driver training courses, which is targeting the highest risk drivers. In addition we plan significant investment in our workforce accommodation and where depots are redeveloped and the opportunity exists to segregate person and vehicle it will be taken.

This accommodation redevelopment also supports our CP6 objective to track to zero Lost Time Injuries. While tacit actions are planned to reduce workforce risk, we need to embed day to day behaviours that support our safety culture. Our Safety Leadership programme will engage all levels supporting senior leadership and frontline teams to improve safety responsibilities.

This programme will be supported by the continuation of our Safety Workshops, linking safety and health behaviours at home and work. These workshops afford a forum to reduce the communicational barriers between the organisational hierarchies and problems to be shared and understood by the Senior Leadership.

Key to our safety improvements is the successful delivery of our Faster Safer Programme. This allows improved compliance with the Electricity at Work Regulations. Successful delivery will reduce our key risks of contact with trains and electricity. Thereby making working on Wessex safer. The programme will reduce manual handling and opportunities for slip, trip and falls. This programme demonstrates the alignment of safety and performance, as it provides not only greater protection for our track workers, but also enables more possession working time allowing for a reduction in back log therefore improving the overall safety of the railway.

Efficiency

Our efficiencies and associated plans have been reviewed and assessed as part of the independent review carried out by Nichols as the independent reporter, and Wessex have reviewed them again in response to the funding needed for additional sustainability.

Our Opex efficiencies are already really stretching, especially as volumes increase in CP6, and we have a vast majority of structural drivers and little headwinds.

Both Capex efficiencies and headwinds have been reviewed for all asset disciplines. When constraining the Route plan because of budgetary targets Asset Managers have constrained the plan by optimising and targeting interventions, driving a plan that delivers safe assets but an unsustainable condition profile. Through this process, scope efficiencies have already been looked at and factored in as much as possible, therefore we do not see any more opportunities in this area. Reasoning and rationale for not being able to increase each category of scope efficiency is detailed in a separate dedicated document shared with NR Centre.

We have thoroughly looked at our other Capex efficiency assumptions in order to identify further opportunities. These have been documented and will be reviewed regularly as assumptions materialise, or not (typically there are potential efficiencies which will be better quantified once we have completed the tendering process).
Headwinds assumptions have also been reviewed and challenged ourselves hard. It is important to stress that by decreasing certain challenged headwinds we will increase our financial risk and uncertainties. Network Rail are working on developing rules to draw on the GPF, it is likely that challenging headwinds will have a direct impact on the likelihood of Routes drawing from contingency.

Wessex proposes an additional £11m efficiencies across asset discipline, and a possible reduction of £3.5m for headwinds A £13m stretch will be identified later in the Control Period as risks and benefits materialise.

Performance

Network Rail and South Western Railway (SWR) have been working together in an alliance since August 2017 when SWR took over the Franchise. The alliance is made up of four areas of joint working which include the performance function meaning that there is a single head of performance for both NR and SWR.

Analysis and forecasting has been carried out by both the NR head of reporting and analysis and the joint performance team with exec level conversations led by the Route Finance Director for NR and the Director of performance and planning for SWR.

The main challenge is that the CP6 exit point is 5% below that specified within the SWR franchise. In the Draft Determination, ORR has specifically challenged Wessex to re look at our trajectory, which we have done, in collaboration with SWR, and have come to the below conclusions which have been shared with ORR on 14th Aug 2018.

CP6 Forecast

The forecast has been prepared by looking at historic trends in PPM and those plans that are included within both the route and TOC plans that will improve PPM.
PPM for SWR has seen a decline over the past 7 years of 0.7% per annum, 0.3% of this decline can be attributed to passenger growth and the remaining 0.4% is attributable to a number of categories including an increase in sub-threshold delay. The split of the 0.7% impact is detailed in our separate Performance response in July 2018 and a further update provided at the meeting in August.

There are a number of initiatives that are built into our plan which address this decline and improve performance with our CP6 plan showing a net improvement of 3.8% across the control period. Details of this are set out in the full document, along with the yearly trajectory through CP6.
The Route met with ARUP at the end of May 2018 in order to explain further the detail behind what the ORR have classed as a 0.4% "unknown" decline and to explain that this is not unknown and should not be referred to as such – there are a number of factors that are driving the long term downward trend in Wessex which includes an increase in sub threshold delay and non-track asset failures. The route has explained what these are and where within the plan these can be mitigated and what further mitigations could be carried out if more funding should be made available.

The Route satisfied all of ARUPs questions in the meeting and the Route believed we had agreement to our proposed numbers.
The route had a further meeting with ARUP and ORR in early August 2018 and ARUP stated they did not believe the CP5 exit position was achievable (given PPM MAA was more than 3% below this at the time of writing). ARUP recommended that the route re-run its Monte-Carlo analysis. After careful consideration, the route maintained forecast for CP6 exit position is 87.5%.

Agreed position & points of disagreement

It has been agreed that the current forecast methodology is sound and therefore the base forecast is agreed, however, the final exit position for CP6 is misaligned from the franchise targets and SWR believe that more can be done to close the gap.

Both SWR and NR agree that it is unlikely the gap in exit position for CP5 can be closed. Both SWR and NR agree that the CP5 exit position of 86.5% is highly unlikely to be delivered and have agreed that 83.7% is a more likely outcome given current levels of performance and associated plans. In order to support delivery of this the WIT should be opened in December 18 regardless of whether the timetable change goes ahead, in order to provide additional resilience. It is also noted that both SWR & NR need to do more in order to deliver the 83.7% or more and they have performance improvement plans in place to address the key areas of train performance deterioration.
SWR believe that there is some performance benefit in having a single fleet in addition to improved management of incidents. The impact of having a single fleet is yet to be quantified by SWR and therefore not included within the plan. NR is yet to see evidence of this benefit and also believes some of these actions are needed to deliver the CP5 exit position and therefore including in CP6 would be double counting.

NR and SWR have agreed to disagree but engagement has been constructive and is on-going.

Sustained Poor Performance (SPP)

Network Rail is concerned that the current SPP threshold at 10% is too readily triggered at 'normal' levels of performance fluctuation. Train operators for which SPP has been triggered have so far been unable to produce evidence to show that they are experiencing revenue losses over and above those provided for by the formulaic Schedule 8 payments, and hence no claims have been successful so far in CP5.

Having such a high number of train operators being able to claim against Network Rail through the SPP mechanism, but being unsuccessful in doing so, creates a great deal of unnecessary industry rancour, and also wastes industry time and money in disputing SPP claims. This can often distract from important joint-industry initiatives, for example on performance improvement schemes. It is therefore important for all industry parties that the SPP threshold is set at an appropriate level for CP6, which is not too readily triggered but which also provides financial protection to train operators when Schedule 8 genuinely may not provide sufficient compensation, in periods of genuinely sustained poor performance.

We welcome ORR's proposal to increase the SPP threshold to 25% for CP6, as we consider that this is the correct direction of change.

Stakeholder engagement

Activities since February 2018

Stakeholder workshop with LEP, councils, local authority etc. in June 18, as well as Quarterly stakeholder board focused on TOCs and FOCs held late June.
There was a strong interest in understanding the process and timescales by which the Route plans can be shared and influenced, and how partnership can be improved.

We have also started working on a wider stakeholder engagement strategy, which will include a stakeholder map and a stakeholder engagement that we can share with our stakeholders and increase visibility of engagement activities.

The stakeholder engagement plan will also enable us to better understand the various activities happening in the different parts of the Route on subjects of interest for our stakeholders and improve coordination and consistency. We will also document the methodology used to categorise and prioritise input and requests from our stakeholders and map it against our bottom plans. These two main sources of information and their alignment

We continue to engage with our key stakeholder groups, namely the LEPs and councils on Rail System requirements and train operators on performance and operational timetable. We recognise the need to co-ordinate and align the communication plans and the capture and management of stakeholder needs across the many 'actors' who carry out the engagement, and have the commitment of our communications, system operator, route asset management and business development team in working on a stakeholder engagement strategy to achieve this.

Wessex also continues to work with FNPO colleagues to monitor performance for CrossCountry on Wessex scorecard.

Specifically on Performance with SWR

The route and SWR have been engaging over a number of months and recent engagement and main topics of discussion have been set out in our separate Performance response in July 2018.

The main approach to this has been to agree that the analysis and the rationale to the numbers is correct, to agree the value attributable to each of the performance improvement plans (for both NR & TOC) and then to identify the areas of disagreement.

The final outcome of these discussions was presented at the alliance performance executive meeting where it was agreed that we would not change our forecast although further work should continue.

Group Portfolio Fund

Wessex Route welcome the ORR proposal to put a greater share of contingency under direct route control. Noting the ORR's conclusions, we are working to confirm our expenditure profiles following our detailed planning of our renewals activities, the level of financial uncertainty, and the detail behind how the release of the fund for cancellable renewals would work.

Research and Development

ORR's Draft Determination proposed cutting the funding for Research and Development (R&D) from £440m to £100m. Our R&D function proposes to retain a funding of £245m with additional match funding budget which would be more appropriate of an organisation of the size of Network Rail. The CP6 SBP has shown the light of the difficulty of maintaining a plan that delivers safety, performance and sustainability with an ageing infrastructure. We support an increased R&D funding to facilitate a step change in the way we manage our assets efficiently.

Other route specific issues

There a few topics very specific to Wessex that we would like to re enforce although already covered in our SBP earlier this year:

Isle of Wight major works funding

The Island Line falls under different franchise terms and conditions from the rest of SWR. A key assumption set out in the Route SBP submission was that this was excluded from the determination. Ryde pier will need renewal within the control period at a cost of c£40m. This additional risk of spend has now been included within the Route plan pending a decision identifying a funding source.

Service Affecting Failure

Wessex Route has managed asset reliability carefully in CP5 and SAF has dramatically improved in the first half of CP5, with Wessex seeing the best improvement in CRI (Composite Reliability Index) of all Routes. Although the rate of improvement is slowing down, it is still improving towards the end of the control period. In order to consolidate CP5 great achievement, Wessex proposes to maintain a realistic and steady level of continuous improvement of 1% year on year.

Deliverability and Digital Railway

Deliverability of the CP6 plan is a legitimate question both at a national and Route level.

Wessex Route have started this process by building a bottom up unconstrained and deliverable plan, which was then reviewed against budget constraints. The product of this review is a budget constrained plan, where asset management decisions have been driven by safety, asset condition and a forecast of funding available. Our plan has been stable and consistent since the start of the process and we engaged our deliverers early on and on an on-going basis. As such, deliverability has been regularly reviewed and confirmed.

The Route are also reviewing the phasing of costs and volumes and adjusting profiling where needed to be in the best possible position to meet the new treasury rules.

We acknowledge that we have a peak of activity in Signalling in year 3, made up of Feltham re signalling in its majority. As deferred renewal from CP5 the development of this scheme is well progressed and plans to complete delivery in year 3 are robust.

Wessex Route is working closely together with Digital Railway on the options to make Feltham a digital scheme and the associated costs and feasibility. The DR team have committed to adhere to the already established timescales so that completion shouldn’t be compromised. The conclusion of this review and next steps will be confirmed in September 2018, timescales will be crucial for a successful integration to our current plan and successful delivery.

Crossrail 2

Crossrail 2 is currently undergoing an Engineering value review and looking at various options for the final rail path. Depending on the outcome of this review, Wessex Route will be more or less impacted, with a high likelihood of the scheme to have important dependencies on the Route carrying specific work in CP6 to enable works to start early CP7 according to current timescales.

Wessex are liaising regularly with Crossrail 2 to identify these dependencies, risks and opportunities and their impact as early as possible. This, as well as Digital Railway, is a very large project that will impact Wessex Route in CP6 and will be monitored regularly. Both are being looked at at our CP7 working group so that planning is as smooth as possible, any emerging risks and impacts can be identified early and mitigated.

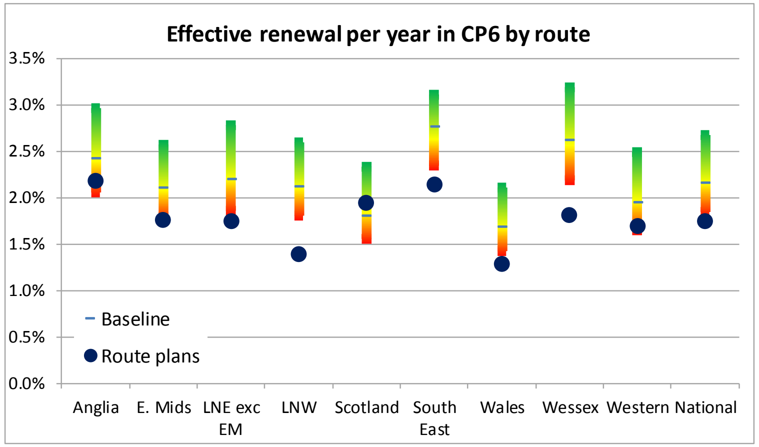
Of note in the Wessex Draft Determination issued June 18

On page one of the Wessex Draft determination, point one, third bullet point, there is a mention of implementing localised Traffic Management Scheme, which is currently an aspiration rather than a commitment.

Wessex Route would like to ask for a correction on page six of the above document: it states that ORR’s consultant Gleeds have met with the route to discuss its approach to cost planning. Wessex have met with Nichols on costs but not met with Gleeds at any stage of the independent review process.

Appendices

Appendix A



Extract from Track asset policy assurance Jan 2018 v2 (NR STE)

This chart shows Wessex are significantly below the constrained scenario for Track Renewals. This is as a result of constrained budget and agreement to prioritise Feltham re signalling work for the Route, following a risk based approach.

NetworkRail

Western Route response to ORR’s Draft Determination

Version 2.4.1

3rd September 2018

Contents

Executive Summary

Western Route welcomes the ORR's Draft Determination and the additional funding in CP6 compared to CP5. We are committed to working with our customers and stakeholders to deliver a better railway for the West. We have reflected on the Draft Determination and are working to revise and refine our plans. This covers a number of specific areas but the response should be taken together as a whole.

Key points:

- We have submitted initial and updated views on how additional money could be used to improve outcomes for asset sustainability, with investment options totalling £50m;
- We have further stretched ourselves on efficiency, identifying £31m of additional efficiency and a stretch of £12m above this;
- We have revised our train performance trajectories, and continue to work closely with our train operating company colleagues;
- We support continued investment in research and development;
- We are focused on our preparations for CP6, using leading indicators and milestone plans for our efficiency initiatives.

Asset sustainability

Our Route Strategic Plan aimed to maintain asset sustainability and to manage the risk to asset condition through the workbanks and maintenance activity proposed. For some assets, our plans resulted in a marginal worsenment in sustainability, typically through a reduction in remaining asset life. Overall, the forecast outturn for the composite sustainability index from our base plan was 1.3%.

To improve this position, and to improve outcomes for level crossing safety, responding to ORR's challenge on sustainability we have submitted both initial and updated views of how additional money would be spent. Modelling of the CSI contribution of these packages shows an improvement to route CSI of up to 0.737%, and 0.0561% to national CSI (based on the initial view of packages).

Safety expenditure

We have accordingly submitted a package of £10m additional expenditure on level crossing safety improvements (which is included within the revised asset sustainability proposal), and a further £4.16m STE funded package as part of the response for additional expenditure for priority passive crossing upgrades, making £14.16m total additional proposed expenditure on level crossings.

Efficiency

Although Western Route faces a number of specific structural changes in CP6 which are genuine headwinds compared to unit rates in place for CP5, nevertheless we have challenged ourselves further on efficiency. We are particularly working with our internal delivery partners to reduce contingency allowances within projects to generate additional efficiency, as well as reviewing the scope of planned works to identify value engineering opportunities, linked to the Intelligent Infrastructure programme. In total, we consider that up to £31m of additional efficiencies may be feasible; an additional stretch of £12m will require further definition. However much more work would need to be undertaken on these initial proposals, particularly with our delivery partners, to assure their viability and subsequently realise them. This efficiency proposal represents a further stretch on our existing plans and detailed delivery plans for the efficiencies are still to be developed.

We note with some concern ORR's plan to specify annual expenditure figures for renewals in the Final Determination, as the principal Western efficiency for CP6 is through workbank packaging for delivery and access efficiencies. If the ORR-specific profile for expenditure is not reflective of our completed activity to rephase our workbanks, then this profile in conjunction with the expenditure limits which will apply in CP6 could preclude and prevent the full realisation of our efficiency plans. We would submit that baselining the annual expenditure profile for the routes in line with Network Rail's Delivery Plan for CP6 would be a more preferable option.

Performance

We note Arup's conclusion that their "confidence of the CRM-P trajectories is that … Western are both realistic and stretching" (1.5.7) and that the GWR PPM outturn "should be deliverable" (table 4.1). We are working with our train operating colleagues to review the assumptions in our performance plans and to more clearly set out the contributions to train performance from all industry partners.

Working with GWR a revised TOC on Self improvement and risk plan, as well as a revised position with respect to CP5 exit, has been modelled to update the CP6 trajectory phasing.

Stakeholder engagement

We are committed to improving our stakeholder engagement and are developing our strategy for continuing stakeholder engagement in CP6. We are planning further engagement workshops for the early autumn where we will work with our stakeholders on the final version of our CP6 plan. However, we are concerned that the SDG assessment of our stakeholder engagement contained a factual inaccuracy regarding the engagement with one of our customers which we have raised with ORR.

Group Portfolio Fund

We welcome ORR's Draft Determination acceptance of the total value of funding for CP6 financial risk (termed the "Group Portfolio Fund") of £2.6bn across the network. We also note ORR's proposed changes to the governance of this funding. We are continuing to work with Network Rail's Group Finance team to agree the detailed arrangements associated with the budgeting for, and use of, the Group Portfolio Fund in CP6.

Research and development

As a route team we support Network Rail's corporate efforts on research and development, in particular a more focused portfolio of research and development activities. It is important to invest in these activities sufficiently to enable the development of interventions which can release efficiency in the future or reduce the safety risks to our workforce.

We have reviewed and endorsed the revised portfolio of research and development initiatives and will work closely with STE colleagues to see these implemented to deliver benefits as soon as possible.

Sustained poor performance

We welcome ORR's proposal to increase the SPP threshold to 25% for CP6, as we consider that this is the correct direction of change.

Preparations for CP6

Our preparations for the start of CP6 are well underway. We are using leading indicators for access planning, workbank authorisation, maintenance capacity and efficiency maturity to monitor progress. All our base plan efficiencies are quantified with a single page remit describing the efficiency and with responsible and accountable managers clearly identified. Milestone plans are in place for each initiative with progressed tracked on a periodic basis so that we can enter CP6 in the best possible state of preparedness.

Detailed response

Asset sustainability

Western Route welcomes the opportunity to put forward packages of work to further improve asset sustainability over Control Period 6.

Our Route Strategic Plan aimed to maintain asset sustainability and to manage the risk to asset condition through the workbanks and maintenance activity proposed. For some assets, our plans resulted in a marginal worsenment in sustainability, typically through a reduction in remaining asset life. Overall, the forecast outturn for the composite sustainability index from our base plan was 1.3%.

To improve this position, and to improve outcomes for level crossing safety, responding to ORR’s challenge on sustainability we have submitted both initial and updated views of how additional money would be spent.

ID	Name	Net cost in CP6 (£m)
RWES01	Cornwall and Devon signalling sustainability improvement	£10.1m
RWES02	Targeted track renewals	£16.7m
RWES03	Level crossing safety enhancements	£10.0m[1]
RWES04	Structures interventions including metallic structures painting	£6.7m
RWES05	Paddington drainage intervention	£1.7m
RWES06	Additional earthworks renewals	£2.9m
RWES07	Fencing and vegetation improvements	£2.0m
	Total:	**£50.0m**

1 The additional STE contribution of £4.16m is a separate programme of emerging technology

Modelling of the CSI contribution of these packages shows an improvement to route CSI of up to 0.737%, and 0.0561% to national CSI (based on the initial view of packages).

Priority of activity

In developing our packages of activity we have sought to propose a balanced programme across our asset base, addressing areas where our base plan did not improve sustainability to the extent that we targeted. We have also been conscious of the investment options proposed in our Route Strategic Plan, and the ORR’s conclusions on specific items of asset sustainability in the Draft Determination.

Specifically, we have prioritised our submission as follows:

1. Signalling: our Route Strategic Plan proposed widespread refurbishment activity, and remaining asset life was modelled to reduce from 16.0 years to 13.8 years;
2. Track: sustainability forecasts showed a modest decline in sustainability in CP6, with an increase in SAF / FWI risk;
3. Level crossings: investment options proposed in the Route Strategic Plan
4. Structures: condition scores were only stable in CP6 and additional work is proposed for metallic structures;
5. Drainage: STE assurance stated that “condition sustained at current levels”;
6. Earthworks: although modelling notes a modest improvement in sustainability, we note wider assurance concerns about earthworks volumes;
7. Off-track: risk of animal incursion and vegetation issues.

Deliverability

All the interventions proposed have been assessed as being deliverable and are being consulted with internal delivery partners. Access requirements have been considered and where disruptive access is required this will be managed through our “OnePlan” integrated access planning process.

Safety expenditure

Although there were no specific safety recommendations for Western Route in the Draft Determination, we note the conclusions regarding level crossing expenditure for the LNW and Wales Routes, and for user worked crossings across the network. We have accordingly submitted a package of £10m additional expenditure on level crossing safety improvements (which is included within the revised asset sustainability proposal, with a forecast FWI benefit of 0.37 over the 40 year average whole life of activities). A further package of £4.16m is proposed to be spent on emerging technologies at priority passive crossings through an STE-held fund, which could lead to an additional FWI benefit of 0.09.

Efficiency

We note ORR's conclusions with respect to financial efficiency. We have engaged with the Independent Reporter in their review of our headwinds and are challenging our efficiency plans. We challenge the assertion levied at a network-wide level about headwinds. Western Route faces a number of specific structural changes in CP6 which are genuine headwinds compared to unit rates in place for CP5. The implementation of the full Great Western intercity timetable, following the completion of electrification in 2019, and the launch of the full Elizabeth line service, both of which increase the number of train services and reduce the available access for maintenance and renewals work, as well as the increase in activity needed to isolate the overhead electric lines, drive costs upwards which needs to be factored into our plans. These are fundamental changes to the infrastructure and operation of the Western Route for CP6 compared to the almost completely non-electrified baseline for the CP5 plan.

However, following the challenge within the Draft Determination regarding our provisioning for headwinds we have reviewed and reconfirmed what these cover and their scale. This review has also identified some areas within the "Headwinds" that on reflection are "risk" issues that we will seek to eradicate, mitigate or reduce. We have also considered how we will draw on the available risk contingency fund that is now proposed to be held in the routes, helping routes to manage such risks (the management arrangements are now much clearer than was the case in formulating our original thinking on the "headwinds").

In addition, we are challenging ourselves further on efficiency. Although our original plans contained a comprehensive efficiency plan, following the ORR Draft Determination challenge, we have looked again at a "stretch" level of efficiency on our costs to deliver the programme.

It is accepted that with strong sponsorship and programme management we should have an objective to deliver further efficiency. We are particularly working with our internal delivery partners to reduce contingency allowances within projects to generate additional efficiency, as well as reviewing the scope of planned works to identify value engineering opportunities, linked to the Intelligent Infrastructure programme. In total, we consider that up to £31m of additional efficiencies may be feasible, as outlined on the table below. However much more work would need to be undertaken on these initial proposals, particularly with our delivery partners, to assure their viability and subsequently realise them. This efficiency proposal represents a further stretch on our existing plans and detailed delivery plans for the efficiencies are still to be developed. The addition of a £12m stretch has yet to be addressed and thus is shown separately in reaching the total of £43m.

Efficiency categories	Totals in RSP (£m)	Proposed changes (£m)	Proposed totals (£m)
Headwinds	£56.7m	-£10.7m	**£46.0m**
Capex headwinds: removal of headwinds for HS2 and obsolete technology	*£22m*	*-£10.7m*	***£11.3m***
Cost efficiencies	£192.3m	+£6.3m	**£198.6m**
Additional capex efficiency through only releasing 95% of authority to projects and holding the remainder at route level to be managed on an as needed basis	*£0m*	*+£6.3m*	*£6.3m*
Scope efficiencies	£13.5m	+£26.0m	**£39.5m**
Scope efficiencies due to sustainability fund, linked to the Intelligent Infrastructure programme	*£0m*	*+£14.0m*	*£14.0m*
Additional stretch to be defined	*£0m*	*+£12.0m*	*£12.0m*
Tailwinds	£0m	£0m	**£0m**
None identified	£0m	£0m	**£0m**
Total net efficiency	£149.1m	+£43m	**£192.1m**

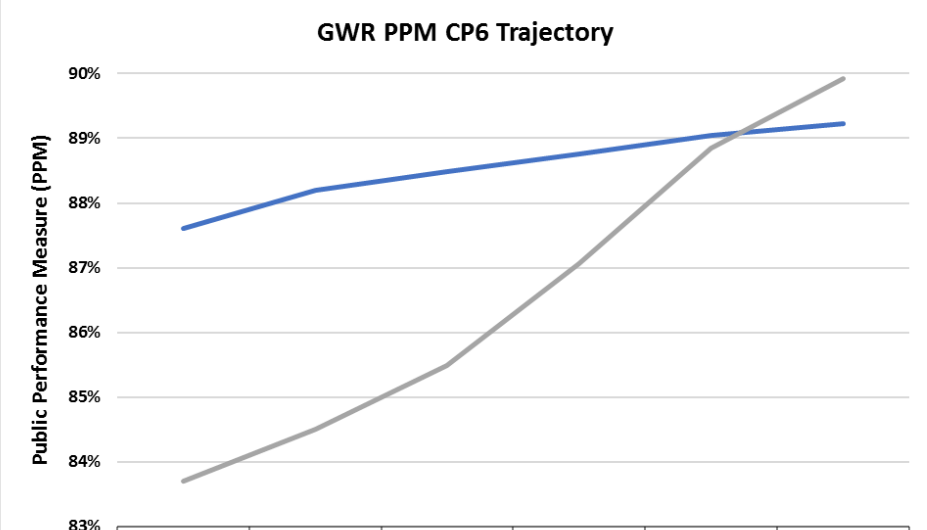
Furthermore, in developing the initial CP6 plan we have undertaken a series of "challenges" to verify and validate that the scope of work we propose is necessary to address risks, secure performance and support longer term sustainability. There is limited further "room" to vary scope. All that said we recognise that we need to be forever vigilant on the specification of the work and to respond to new knowledge and insights that may have a minor baring on the justifiable scope we should deliver.

We note with some concern ORR's plan to specify annual expenditure figures for renewals in the Final Determination. While we understand ORR's position of wishing to specify and therefore protect the integrity of the route financial settlements for CP6, we note that the principal Western efficiency for CP6 is through workbank packaging for delivery and access efficiencies. This activity is underway with completion expected at the end September to inform the November update of Network Rail's strategic business plan. If the ORR-specific profile for expenditure is not reflective of our completed activity to rephase our workbanks, then this profile in conjunction with the expenditure limits which will apply in CP6 could preclude and prevent the full realisation of our efficiency plans. We would submit that baselining the annual expenditure profile for the routes in line with Network Rail's Delivery Plan for CP6 would be a more preferable option, and would mitigate the need to explore use of the mechanism for managing change early in the control period.

Performance

We note Arup's conclusion that their "confidence of the CRM-P trajectories is that … Western are both realistic and stretching" (1.5.7) and that the GWR PPM outturn "should be deliverable" (table 4.1). We have worked with our train operating colleagues to review the assumptions in our performance plans and to more clearly set out the contributions to train performance from all industry partners.

Working with GWR a revised TOC on Self improvement and risk plan, as well as a revised position with respect to CP5 exit, has been modelled to update the CP6 trajectory phasing, as shown on the graph, below. We continue to work with DfT to understand the position with respect to the ongoing Direct Award process for GWR, and will continue to work with GWR as they further develop their performance plans for the future.



	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Original	87.6%	88.2%	88.5%	88.8%	89.0%	89.2%
Revised	83.7%	84.5%	85.5%	87.1%	88.8%	89.9%

Western Route supports Anglia as lead route for the Elizabeth line in a request that the ORR agrees an option to re-open the Schedule 8 performance benchmarks mid-way through CP6, once the effects of operator and infrastructure change programmes are fully understood. We are working with Heathrow Express to continue to focus on right-time delivery, while understanding the implications of the recently announced changes to the operation of Heathrow Express services and fleet replacement.

In response to comments in Arup's assessment of performance trajectories about the quantification of traffic management benefits, we can confirm that as the current installation of traffic management is a trial for the express purpose of assessing whether there are any benefits from traffic management, and given that the trial will finish in June 2019, no benefits from traffic management have been, or can be included in the CP6 trajectory.

Stakeholder engagement

We welcome ORR's views on our stakeholder engagement. We are committed to improving our stakeholder engagement and are developing our strategy for continuing stakeholder engagement in CP6.

We are planning further engagement workshops for the early autumn where we will work with our stakeholders on the final version of our CP6 plan. We also intend to seek our stakeholder views on our draft engagement strategy and also on how we can be more transparent in making decisions responding to our stakeholders' views.

We note that not all stakeholders felt we had engaged with them as fully as they would have liked and are committed to addressing this. However, we are concerned that the SDG assessment of our stakeholder engagement contained a factual inaccuracy regarding the engagement with one of our customers, specifically where it is stated that we only engaged with a customer after they wrote to us in autumn of 2017. As highlighted to ORR the customer had a number of opportunities to engage, which included their attendance at our February 2017 stakeholder engagement workshop and being sent a draft copy of our route strategic plan for their comment in June 2017 (although no feedback was received).

Group Portfolio Fund

We welcome ORR's Draft Determination acceptance of the total value of funding for CP6 financial risk (termed the "Group Portfolio Fund") of £2.6bn across the network. We also note ORR's proposed changes to the governance of this funding. Network Rail's Group Finance team have developed revised governance arrangements for the three categories of risk funding, reflecting ORR's draft decisions. As the majority of risk funding will be held in routes, the route will now be responsible for managing all financial risk in our plans, except those that are truly exceptional. We are continuing to work with Group Finance to agree the detailed arrangements associated with the budgeting for, and use of, the Group Portfolio Fund in CP6.

Research and development

As a route team we support Network Rail's efforts on research and development, in particular a more focused portfolio of research and development activities. It is important to invest in these activities sufficiently to enable the development of interventions which can release efficiency in the future, or reduce the safety risks to our workforce.

We have reviewed and endorsed the revised portfolio of research and development initiatives and will work closely with STE colleagues to see these implemented to deliver benefits as soon as possible.

Sustained poor performance

Network Rail is concerned that the current sustained poor performance (SPP) threshold at 10% is too readily triggered at "normal" levels of performance fluctuation. Train operators for which SPP has been triggered have so far been unable to produce evidence to show that they are experiencing revenue losses over and above those provided for by the formulaic Schedule 8 payments, and hence no claims have been successful so far in CP5.

Having such a high number of train operators being able to claim against Network Rail through the SPP mechanism, but being unsuccessful in doing so, creates a great deal of unnecessary industry rancour, and also wastes industry time and money in disputing SPP claims. This can often distract from important joint-industry initiatives, for example on performance improvement schemes.

It is therefore important for all industry parties that the SPP threshold is set at an appropriate level for CP6, which is not too readily triggered but which also provides financial protection to train operators when Schedule 8 genuinely may not provide sufficient compensation, in periods of genuinely sustained poor performance.

We welcome ORR's proposal to increase the SPP threshold to 25% for CP6, as we consider that this is the correct direction of change.

Preparations for CP6

Our preparations for the start of CP6 are well underway. We are using leading indicators for access planning, workbank authorisation, maintenance capacity and efficiency maturity to monitor progress. Our "OnePlan" integrated access planning initiative is making good progress in dating workbank items through the whole control period which will inform access requests in the Engineering Access Statements. We have set ourselves the goal of authorising the first year's renewals workbanks by early autumn and are making progress on our efficiency plans. All our base plan efficiencies are quantified with a single page remit describing the efficiency and with responsible and accountable managers clearly identified. Milestone plans are in place for each initiative with progressed tracked on a periodic basis so that we can enter CP6 in the best possible state of preparedness.

Network Rail's response to ORR's Draft Determination: Charges & incentives

31 August 2018

Executive Summary

The main points we make in response to ORR's document are:

- **It is vital that the Schedule 8 regime is calibrated accurately including benchmarks that are set at a realistic level.**
- **There needs to be a Schedule 8 reopener for CrossRail and Thameslink.**
- **We note from the Draft Determination that ORR states that it will publish the rationale for its decision on setting the freight and charter benchmark "shortly". We would welcome ORR doing this so we can better understand its rationale.**
- **ORR should use a realistic traffic baseline for the ICC and not expose us to an unreasonable amount of financial risk in CP6.**

ORR's document is a useful summary of its position on the charges and incentives regime. We welcome ORR creating a transparent and permanent log of its PR18 decisions.

It is important that the charges and incentives are calibrated accurately so that they have the best chance of influencing behaviours.

Accurate charges will also mean that Network Rail should receive the appropriate amount of income.

We note that in CP5 there was an error in the Schedule 8 regime which meant that a time-consuming activity of correcting the error had to be carried out. This is why we support there being a robust approach to checking that the charges and incentives have been correctly calibrated.

For PR18, as was the case in PR13, ORR delegated the recalibration of the existing charges to Network Rail. Network Rail has carried this exercise out in close collaboration with industry stakeholders. This included:

- A number of RDG organised meetings where the recalibration activity was discussed;
- A formal industry consultation on our proposed approach to recalibration each of the charges;
- A formal conclusions document on how we have recalibrated each of the charges; and
- Publication of draft price lists, consistent with ORR's Draft Determination by mid-August.

We concluded our part of the recalibration activity by writing to ORR at the end of August formally proposing how each of the charges that we were responsible for, should be recalibrated for CP6. This letter is available on our website and also refers to other documents that we published as part of our work to recalibrate these charges.

Therefore, we have only commented on the charges for which ORR led the recalibration i.e.

- Infrastructure Cost Charges;
- VUC caps for freight operators; and
- Schedule 4 Notification Discount Factors.

Because ORR's Draft Determination includes other charges documents, we only briefly re-iterate the points that we make in responding to those, here. We have also responded to these Draft Determination documents:

- Variable usage charge consultation; and
- Infrastructure cost charges consultation.

Charges recovering fixed network costs

Network Rail's fixed costs do not vary, in the short-term, with different levels of traffic. We agree that we should be financially incentivised to increase traffic levels on the network, so as to make maximum use of railway assets for funders and users. However, because our costs do not vary at different traffic levels we consider that for the new Infrastructure Cost Charge (ICC):

- ORR should use a realistic baseline traffic level;
- Not expose us to an unreasonable amount of financial risk; and
- If ORR continues to consider that we should be exposed to some downside financial risk in CP6, we strongly believe that the level of our exposure should be significantly less than the £280m over CP6 set out in its Draft Determination.

We note, however, that ORR's Draft Determination meant to quote a maximum downside financial exposure figure of c. £50m over CP6, which we consider is more reasonable.

Station charges

We led on the recalibration of this charge. We have recently written to ORR asking them to adopt our work for CP6.

Variable Usage Charge

We led on the recalibration of this charge. We have recently written to ORR asking them to adopt our work for CP6.

ORR led on the capping of freight variable charges. Network Rail supports a broadly stable infrastructure charging position for freight in CP6. We recognise that this helps support existing traffic and growth, which is important to freight and core to the CP6 Strategic Business Plan. Ultimately, it is not just about the level of charges, but the overall financial / funding proposition for freight. Network Rail also supports the principle of cost reflective charges, though recognise that capping / phasing may be appropriate. However, any changes to ORR's proposed caps/phasing would mean reductions in other Network Rail activities and programmes for CP6 recognised in the ORR's Draft Determination, given the fixed funding in the SoFA. Overall, Network Rail considers that ORR's proposals in this area are reasonable.

Capacity Charge

We note ORR's proposal to remove the Capacity Charge in CP6. We will be financially exposed to the 'on expectation' higher Schedule 8 costs when additional trains use the network. Therefore, the removal of the Capacity Charge will mean that we will not be able to recover these costs from the train operators that cause them. The new ICC will go some way toward making up for the loss of income that we will suffer from the removal of the Capacity Charge. However, our high-level analysis suggests that it will be insufficient to make up the loss of income from the removal of the Capacity Charge and Volume Incentive.

The Capacity Charge is calibrated on sophisticated modelling of the financial impact of higher Schedule 8 costs from running additional trains. The ICC, by contrast, is not based on this modelling. Therefore, the ICC will lead to additional income that will be poorly correlated to the higher Schedule 8 costs that we will incur.

We consider that the decision to remove the Capacity Charge will, therefore, worsen the cost reflectivity and damage financial incentives for us to accommodate additional trains on the network in CP6.

Coal Spillage Charge

We support ORR's decision to remove the Coal Spillage Charge in CP6.

Electrification asset usage charge (EAUC)

We led on the recalibration of this charge. We have recently written to ORR asking them to adopt our work for CP6.

Traction electricity charge (EC4T)

We led on the recalibration of this charge. We have recently written to ORR asking them to adopt our work for CP6.

Schedule 8

We have worked closely with industry colleagues throughout the industry led Schedule 8 recalibration. We do not seek to repeat most of the arguments we made during this process. However, we do re-iterate the importance of the regime being recalibrated accurately. The Schedule 8 regime was introduced to de-risk franchisees from the financial effects of performance levels different to those that they assumed when they won their franchise. If the Schedule 8 regime is not accurately recalibrated risks will, instead, be imported into franchisees' businesses.

However, there is clear evidence that ORR has set the freight benchmark at a level that will lead to c.£5m of Schedule 8 payments annually from NR to freight operators. We note from the Draft Determination that ORR states that it will publish the rationale for its decision on setting the freight and charter benchmark "shortly". We would welcome ORR doing this so we can better understand its rationale.

We welcome ORR's recent proposal in its July 2018 working paper to increase the Sustained Poor Performance (SPP) threshold for CP6 to 25 per cent. This will improve industry relationships and provide a more realistic financial incentive. We submitted our response to ORR's proposals in July 2018.

Schedule 4

We have worked closely with ORR and industry colleagues throughout the Schedule 4 recalibration. We do not seek to repeat the arguments we made during this process. However, we do re-iterate the importance of the regime being recalibrated accurately.

Route-level efficiency benefit sharing (REBS) mechanism

We support ORR’s decision to remove REBS in CP6.

Volume incentive

We recognise why the removal of the Volume Incentive for CP6 is appropriate. This does, however, remove a financial incentive for us to accommodate more traffic on the network. The removal of the Capacity Charge exacerbates this problem. ORR’s proposals to vary how much income we receive toward our fixed costs does partly address the reduced financial incentives. However, our financial incentives to accommodate more freight trains are more limited.

We are also concerned about ORR’s proposals traffic growth information that we will need to provide. Specifically, we think that the route scorecards should be the only place where traffic growth is reported.

Network Rail's response to ORR's Draft Determination: PR18 Econometric top-down benchmarking

31 August 2018

Contents

Executive Summary

Network Rail welcomes the work which ORR has undertaken in econometric benchmarking to scrutinise our efficiency and to help set challenging yet achievable efficiency targets. However, we have significant reservations about some of the approaches which have been taken to develop this work and which appear to have led ORR to conclude that: *"Our work is strongly indicative that inefficiencies exist within Network Rail but the current constraints on data limit our ability to quantify these with sufficient accuracy"*. Further to this we support ORR's conclusion following this work: *"the data and analysis does not support bona fide differences in the difference in efficiency between the routes"*.

ORR's top-down econometric modelling of maintenance activity by DUs is helpful in showing the differences in perceived levels of productivity. However, this analysis is inconclusive in showing causation due to the number of variations which ORR has not been able to account for in its analysis.

Network Rail appreciates that this work is a starting point and we will continue to work with ORR to develop analysis which meets both ours and ORR's requirements. We invite ORR to contribute to our ongoing workstream to develop an Asset Management Demand Model (AMDM) which in turn is helping us to understand the productivity and efficiency of Network Rail's maintenance workforce.

Our own initial analysis concluded that benchmarking alone gives us indication of where best practice is but it does not accurately give us the scale of efficiency we should be expecting.

Key points which have been addressed in this paper include:

- Network Rail does not agree with the approach to combine both maintenance and renewals to form TOTEX.
- Use of Corrected Ordinary Least Squares (COLS) as a regression method and cost frontier prediction assumes that the workbank does not vary significantly from year to year. This is not the case with renewals.
- The methodology used for steady state adjustment for the renewals workbank covers only a small part of the renewals workbank (track renewals) and an assumption has been applied that all other assets are being renewed at a steady state, according with ORR's Draft Determination (i.e. after an adjustment has been made to expenditure to deal with year-on-year fluctuations).
- Trade-off between maintenance and renewals: there is a connection between the maintenance and renewal workbanks, however this is not a simple linear relationship.
- Our own initial route level analysis developed a model which used six key variables to allow direct comparison between the routes regardless of size and complexity.
- Network Rail has begun a piece of work to understand productivity and efficiency of maintenance at a DU level and to develop an Asset Management Demand Model (AMDM).

Detailed response

This response starts by discussing our views on ORR's econometric benchmarking analysis. We then discuss the ongoing Network Rail workstream to develop an Asset Management Demand Model (AMDM), which is helping us to understand the productivity and efficiency of Network Rail's maintenance workforce. We would welcome ORR's input into this project.

1. Econometric top-down benchmarking of NR routes' total maintenance and renewal costs

Context

Network Rail welcomes the work which ORR has undertaken in econometric benchmarking to scrutinise our efficiency and to help set challenging yet achievable efficiency targets. However, we have significant reservations about some of the approaches which have been taken to develop this work and which appear to have led ORR to conclude that: *"inefficiencies exist within Network Rail but the current constraints on data limit our ability to quantify these with sufficient accuracy"*. Further to this we support ORR's conclusion following this work: *"the data and analysis does not support bona fide differences in the difference in efficiency between the routes".*

ORR took a route and Delivery Unit (DU) led approach to this analysis; previous Draft Determination econometric analysis has used international benchmarking data. We support this approach. It is difficult to ensure comparability between these international datasets and to understand the underlying strategic decisions which have taken place when comparing international data. This has previously led to unreliable conclusions and unachievable efficiency targets being imposed. We are continuing to work with our international counterparts to understand these issues and to share best practice with them.

ORR's top-down econometric modelling of maintenance activity by DUs is helpful in showing the differences in perceived levels of productivity. However, this analysis is inconclusive in showing causation due to the number of variations which ORR has not been able to account for in its analysis.

Network Rail appreciates that this work is a starting point and we will continue to work with ORR to develop analysis which meets both ours and ORR's requirements. We invite ORR to contribute to our ongoing workstream to develop an Asset Management Demand Model which in turn is helping us to understand the productivity and efficiency of Network Rail's maintenance workforce.

Methodology

Use of COLS as a regression methodology

As stated in the report: *"COLS main drawback is that it assumes that any unexplained variation in cost is due to relative (in)efficiency.*
The COLS methodology which adopts a strong (and perhaps unrealistic) assumption that all the deviation from the frontier reflects inefficiency, we made the assumption (as in our PR13 analysis) that 25 per cent of modelled inefficiency is explained by random noise in the data. We therefore applied a 25 per cent uplift to our modelled notional efficiency scores."

It is unclear as to why 25 per cent modelled inefficiency has been applied to the data and Network Rail do not recognise this figure. We would like to understand further why this was applied.

The use of COLS to model frontier efficiency assumes that the entire workbank within each DU or route is largely the same and that this does not vary from year to year. Our analysis has shown that the mix of work undertaken during a year can cause the majority of change in spend, this is largely driven by renewal schedules.

Our own analysis at project level has identified significant variation in the mix of work delivered by routes. For example - Buildings work varies from painting at £19 per unit to turnstiles at £9,039 per unit. This inconsistency in the work mix between routes introduces a high level of variation in expenditure and this factor alone accounts for the greatest variation between route expenditure not inefficient work within the route or DU.

The change in work mix will give an unrealistic variation between routes which will be calculated by the COLS regression as a potential frontier to be achieved by other routes.

Use of TOTEX

We do not agree with the approach taken to combine spend for renewals and maintenance (TOTEX). There are significant differences between the renewals and maintenance workbank. Our maintenance spend is dwarfed by our spend on renewals (approximately £800 million verses £3 billion).

Maintenance

Maintenance is work undertaken on Network Rail's existing asset base (as opposed to installing new assets) and is driven by the 'Standard Jobs' associated with each asset. These are pre-defined activities which are a mix of ongoing cyclical work to sustain the condition of and prevent asset failure, and reactive work to correct faults. This work is managed and largely delivered by the internal workforce based across Network Rail's 36 DUs. Our maintenance work profile is generally stable from year to year as the assets and their maintenance regimes do not change significantly. Maintenance activity is carried out by our internal workforce whereas renewals are carried out by external organisations. This means that commerciality has less of an impact within maintenance.

Our initial work undertaken to understand the drivers involved in the build-up of maintenance costs, showed that approximately three quarters of maintenance cost is associated with labour expenditure and that plant and materials make up a relatively small proportion (one quarter) of cost. The quantity of work which is completed is based on policy set between the regulator and Network Rail's technical teams. This is based on the maintenance regime which is required to keep the railway safe.

Renewals

Renewals are generally carried out by Infrastructure Projects and contractor teams. The workbank is planned up to five years in advance and proposals included in the workbank are to reflect the work required to keep the asset in steady state condition and quality. The renewals profile is 'lumpy' and varies significantly from year to year and from route to route. This in turn influences work levels and spend in each route. This may imply efficiency between routes when there is in fact just a variation in work mix in that year.

There are greater opportunities in our renewals portfolio to influence efficiency. However, our analysis has shown that this is due to commercial issues rather than issues of inefficiency in delivery between routes. Our contracts with suppliers are national and dictate a number of things:

- The basic cost per unit.
- The minimum volume, after which the contract goes to a cost emergence contract.
- The plant/materials/support Network Rail should supply.

Our renewals costs frequently escalate. This is not necessarily due to inefficient delivery. We estimate costs early and before a project has been through early GRIP stages to determine a likely cost. As more is found about the cost and scale of the project, estimated prices invariably increase and the cost of the project also increases, as the work is better defined.

Trade-off between maintenance and renewals

We do not agree that there is a linear trade-off between maintenance and renewals. The level of maintenance required is related to the number of assets and their maintenance regime. Renewing an asset does not automatically reduce the number of interventions which are required by an asset standard.

We would expect there to be a reduction in the demand of work-arising activities for a newer asset and levels of maintenance tend to increase with both a desire for greater performance and as assets age.

Network Rail has implemented risk-based maintenance to manage asset reliability and asset whole life cost and allow us to safely maximise asset usage for minimum intervention. This has meant moving from time-based fix and find regimes to intelligent, proactive, functional based regimes. We have found that, whilst better insights from intelligent infrastructure will improve targeting of maintenance, CP6 proposed levels of maintenance do need protecting to realise the improved performance levels sought.

Limited number of variables and data quality/availability

The analysis carried out by ORR has a limited number of variables and these have limited correlation. These variables do not explore the vast number of variables which can influence the spend which takes place in each route over the course of a year. We have explored more variables as part of our Asset Management Demand Model and we discuss our own analysis later in this paper.

We moved from ten to eight routes as part of devolution at the start of CP5. This means there is limited data available in our latest structure. As we progress through CP6 we will have more data collected by the eight routes which we will be able to feed into the route and DU analysis.

We would propose to continue to work closely with ORR to assist them in recognising the most appropriate datasets.

Dealing with renewals cost fluctuations: steady state adjustments

The methodology used to calculate steady state renewals covers only a small part of the total renewals workbank (track renewals) and makes no allowances for increases in traffic and therefore increased degradation on the infrastructure, desire to improve asset performance etc. There is no accounting for work mix and like for like jobs. For example, the analysis will compare refurbishment and full renewal and assume that a full renewal is less efficient than a refurbishment. However, it is different work and one may be selected above the other as this is the most appropriate intervention. To enhance the reliability of this analysis it needs to be carried out at a more granular level and include other assets.

Renewals are dictated by various factors (including ages of assets, wear, and access availability) making it difficult to infer that any level of renewal is steady state (i.e. removing the year-on-year fluctuations of renewals expenditure) and that variation in work levels relates to efficiency.

Assumptions drawn from data

ORR made the following statement: *"Then we examined the track renewal spend per track km renewed. Our data reveals that on average in 2013-14 routes spent more money per kilometre of track renewed (about £1.4m/track km) than in any other year. This being the final year of CP4, we suspect this was a reflection of the attempts made by all the routes to meet the CP4 exit targets. On the other hand, for the last 5 years an average route spent about £1.03M per kilometre of track renewed"*

We do not feel the above statement implying that more money was spent during the final year of CP4 to meet CP4 exit targets is something which can be drawn from the limited availability of historic data. We do not recognise this to be an attempt to meet regulatory targets by the end of the control period. During this period Network Rail had a differing funding mechanism and we could increase our expenditure if the output was seen to be valuable.

Conclusion on ORR's analysis

The analysis which ORR has undertaken shows that the routes are 84 per cent efficient when compared to the modelled frontier route.

We agree that this data cannot be used to reliably set route efficiency targets. However, we do not agree that this report provides evidence that there are "significant" inefficiencies remaining in the SBP forecasts for CP6.We do not feel the methodology which has been used is robust enough to draw any conclusions at this stage.

The methodology has found differences between our routes and an assumption has been made that this is inefficiency. This is not the case and negatively biases the analysis. These differences can be explained by a multitude of different factors.

We have conducted our own research into the efficiency of routes and found they are much closer to the efficiency frontier and that much of the variations in route spend can be explained by variation in route workbanks rather than by any attainable efficiency.

2. How Network Rail is assessing efficiency in CP6

In this section, we discuss the ongoing Network Rail workstream to develop an Asset Management Demand Model (AMDM), which is helping us to understand the productivity and efficiency of Network Rail's maintenance workforce. We would welcome ORR's input into this project.

Renewals will be assessed for efficiency on an individual project basis, using variation from anticipated forecast cost to establish if the project has made efficiencies or suffered from unanticipated headwinds. Alongside this analysis, renewal costs will use a bespoke unit rate.

There are many factors at play within our large organisation which can influence renewal spend across a series of years and routes. These do not indicate that the route is more or less efficient than another, only that the work which they are delivering is different.

Network Rail's initial analysis

We took the decision for our own analysis to separate expenditure into maintenance and renewals, enabling us to deliver separate models that meet the differing nature of these activities. i.e. maintenance is more cyclical and predictable than renewals activity.

Renewals

Network Rail undertook modelling work which was designed to:

- Provide assurance of renewal cost and volumes within the route business plans.
- Benchmark routes and years in relation to cost of renewals, highlighting significant variance.
- Provide visibility of the key factors that affect renewals cost, ensuring informed financial planning.

Our objective has been to provide rationale for variance in cost between routes and year and to challenge route expenditure and proliferate equal levels of efficiency across the business based on benchmarked performance.

A cost calculator model was created which enables volume costs to be estimated based on variables identified.

Once work mix has been accounted for, the following variables were identified as affecting costs at a project level:

- Traffic density
- Age of asset being renewed
- Access availability
- Electrification
- Regional cost variation e.g. London premium
- Emergency works
- Location topography e.g. steep banks, curved line.
- Rural vs urban
- Main line vs branch line
- Density of S&C
- Density of tunnels & bridges
- Technology installed

This list is not exhaustive.

While these variables do not have a clear linear relationship with total route expenditure, where work mix is accounted for, these variables do have an influence on project costs.

Our analysis shows that benchmarking on the basis of amount or type of asset is not appropriate for renewals. The majority of variance between routes when looking at Key Cost Lines (KCLs) is down to the work that has been completed or work mix. This is driven by the variables which we have identified.

Efficiency within renewals is a question of commerciality, estimation and contract management and not one of how much it should theoretically cost to renew an eclectic combination of assets.

We can have an impact on the cost of renewal but as the majority of delivery of renewal is not completed by Network Rail employees but by contractors who deliver packages of work, the impact that we have is in areas such as commercially within contract management, scoping and estimation.

However, where costs increase due to poor scoping, this does not mean delivery is inefficient; it simply means we have an underestimated workbank and therefore have a cash risk.

Where Network Rail meet their contracted obligations in terms of access, plant and materials, the risk regarding inefficient delivery is held by our contracted deliverers.

Maintenance

Our analysis has not been completed at DU level, as there are added complexities such as asset hosting and cross boundary working which need to be taken into account when using DU based analysis. Across a route, these variances are assumed to be equalised.

We devised a model to look at the required maintenance each asset generates over a year in both terms of scheduled preventative maintenance and reactive maintenance. Before any equalisation of cost, the range between maximum and minimum rate was found to be 66 per cent with greater cost being in busier routes. Anglia, LNW and South East showed the highest costs.

We then calculated "Maintenance Required by Route KM" by route. To calculate this, the Maintenance Standard Tasks (MSTs) by route were reviewed and the amount of time needed to complete those tasks based on route norm times and added reactive minutes generated, we then applied the following variables to the data

- Regional salary variance
- Route complexity
- Area to cover
- Route criticality
- Access – Green Zone
- Normalised expenditure

This allows for direct comparison between routes such as South East which has comparatively fewer route KMs, but far more complex and demanding asset base than a route such as Scotland which covers a larger area.

When taking these variables into consideration, which have an impact on a route's ability to deliver maintenance, we can see that the cost to maintain the infrastructure is broadly similar across the business. The total route range is 12.5 per cent after looking at the six key variables. Variance to the average ranges from six per cent to -7.5 per cent and we are left with some residual variances between routes. These residual differences are likely to be attributable to other less tangible factors such as: access time and the ability to physically get onto the infrastructure due to the positioning of access points; and management control including financial control, cost consciousness and management influence.

We can conclude that benchmarking alone gives us indication of where best practice is but it does not accurately give us the scale of efficiency we should be expecting.

Work by Network Rail to understand productivity and efficiency

Network Rail is committed to understanding the productivity and efficiency of its maintenance workforce. Significant work and progress has been made in understanding and developing the management and tracking of productivity across the DUs. However, it is understood that each of the current methodologies has limitations and that further work is required to truly understand the position of productivity within individual delivery units whilst controlling for variables to generate the ability for benchmarking and comparability between routes and locations. We would welcome ORR's input into this project to further develop our joint understanding of productivity, drivers and efficiency.

Development work to progress understanding of the measures

In order to understand the perceived differences in productivity between DUs Network Rail continues to develop methodologies and tools to support the analysis of this area and drive improved comparability. Further work and development is taking place on the Activity Based Planning Tool (ABPT) to improve the ability to benchmark and calibrate the information contained within the model across routes as it is further used in the business planning and forecast cycles.

To build on the use of the ABPT and to further understand comparable productivity across areas a new project has been initiated. The objective is to develop a management support tool that will look at the end to end process of how demand for work is generated, levels of productivity that are achievable and workforce planning required to deliver this. This model is called the Asset Management Demand Model (AMDM) and along with allowing scenario planning to model business changes, the model will seek to answer questions on comparability such as: how does productivity compare across similar assets and sections across DUs?; and what is the effect of factors such as travel times, shifts or team set-up on achievable productivity? This project will sit alongside and complement the ABPT within route businesses.

Significant progress has been made in understanding and developing the management and tracking of productivity across the DUs However, it is understood that each of the current methodologies has limitations and that further work is required to truly understand the position of productivity within individual DUs whilst controlling for variables to generate the ability for benchmarking and comparability between routes and locations. This will be addressed through working to develop the ABPT and AMDM.

Description of Network Rail's currently published productivity measure

Productivity as an efficiency measure is based on work completed and time available for work. It has been used by the maintenance function for six years and is compiled by using completed work volume data from Ellipse to estimate the amount of time spent delivering activities, whilst making an allowance for time spent on protection activities, e.g. lookouts.

Assumptions included in the calculation

The calculation excludes essential non-value added standard jobs (that are still to be booked) to ensure all time is allocated, It uses time sheet data to determine the amount of time available for work. It is **not** based on recorded time on tools and non-time on tools data. It is calculated for every section (cost centre) every week and rolled up to give a figure at DU, route and national levels.

Summary of the current measure

- Productivity is the ratio between Norm Hours produced and Maximum hours.
- It only relates to direct staff.
- It is measured based on Norm Time not Time on Tools.
- It is derived from Ellipse volumes, timesheets and sub-contract hours.
- It makes allowance for time spent for protection.
- It is recorded at cost centre level and rolled up to DU, route and national level.
- It has strict timelines for closing work orders and submitting sub contract hours.

Five measures of productivity

Network Rail has developed and is using the "five measures of productivity". These multiple measures allow a user to have a better understanding of productivity drivers and appreciates that productivity is more than just an increase in time on tools.

The five measures are:

1. **Contracted Hours Worked**
    - This is important as a missing timesheet is not an indication of someone not receiving the correct pay each period, but is a measure of the completeness of our records.
2. **Hours Worked Not Recorded**
    - This measure shows whether we have accurately recorded the activity completed by the workforce in their day-to-day maintenance.
    - It measures that the number of hours recorded in Ellipse are equal to the hours available according to timesheet submissions and is purely a measure that we are recording all the work that being done on the infrastructure accurately.
3. **Time on Tools**
    - The proportion of available hours that have been recorded as activity specific standard jobs.
    - It is designed to measure how well the labour workforce are being utilised.
    - This is important as measuring and seeking to improve time on tools is based on the requirement to make the most of our largest and most important asset.
4. **Planned vs. Actual Output**
    - Appreciating that productivity is the amalgamation of the efforts of a number of people and departments, this measure seeks to review how much of the original plan is delivered.
    - This is important as the base assumption is that planned work is cheaper to deliver than unplanned work and a planned shift is likely to contain more activity than a shift which completes unplanned works orders.
5. **Key Task Efficiency**
    - The final measure reviews the amount of time that is taken to deliver a unit of work. In effect, it measures the product that you receive for the number of time on tools hours that you employ.
    - This is important as it allows you to measure if there has been improvement or degradation in the processes and techniques used to deliver a certain type of work.

All five measures can be looked at in isolation but are designed to work together; by comparing the measures together it allows anomalies to be identified.

These measures are not designed to replace the current national measure but rather to provide insight into it. Currently there are no centrally defined targets for any of these five measures. Any target setting is done within routes/DUs to be reflective of local level understanding and requirements.

How productivity information is used and what are the limitations

The current productivity information is successfully used within DUs and sections to drive and inform continuous improvement initiatives. The information is also used to establish the correct information to populate and flex the assumptions within the ABPT.

There are some inherent limitations within the structure of the published calculation that could result in a downward shift in the recorded productivity measure that is not driven by an underlying change in performance, including:

- Reductions in the number of work orders closed for works delivery, off track and rail testing by the reporting deadlines.

- Drilling into the productivity data it can be revealed that there has been less red zone working which results in less uplift in norm times due to the protection factor multiplier not being applied to the calculation.

Variation in productivity across delivery units

When looking at DU level there is a perceived difference in the levels of productivity which can be attributed to a number of variables and differences that are inherent in the structure and operational model of these different locations. This can be attributed to the following factors:

- Volume of traffic/freight.
- Geography and travel time to work location.
- T&Cs and pay levels of resource based on TUPE from previous maintenance operator before insourcing of this activity.
- Access.
- Criticality of track and PPM target of TOC.
- Interpretation of standards/policies and subsequent maintenance regimes required to ensure safety and compliance.

It should also be stated that controlling for these factors would not directly result in the ability to drive efficiency and productivity within a control period as the variables may be driven by the physical asset location between DUs. Depending on the asset lifecycle this may only be economically viable to address upon the renewal of that specific asset or asset grouping (potentially a time horizon of over 20 years).

Identified potential productivity differentials may not always be easily realised. For example, it may be that employee terms and conditions are a constraint that would need union consultation to change, resulting in barrier to change. In this situation the opportunity needs to be weighed up in respect of any potential outcome of negotiations.

ORR's top-down econometric modelling of maintenance activity with DUs was helpful in showing the differences in perceived levels of productivity but inconclusive in showing causation due to the number of variations between the locations.

What are we doing to develop the measures?

Due to the complexity and difficulty in analysing the different levels of efficiency and productivity within the DUs, certain developments and tools have been established. These include the ABPT and the AMDM which will act in synergy to provide greater insight and the ability to contrast and compare differing levels of productivity.

Activity based planning tool (ABPT)

The ABPT was developed to improve the existing planning process, focusing on the required volume of activity required within the route to effectively serve the maintenance demand. The ABPT means that activities drive the resource and subsequent cost, rather than the amount of maintenance being contingent on the amount of resource.

- The ABPT is used as part of the business planning process for each DU, and includes all costs for a DU.
- Is based on their own data for job times and people costs.
- Allows for scenario and "What If" analysis – balancing resources (cost and people).
- This has been welcomed by routes and has been developed closely with them to make the completion of the tool value-added and as efficient as possible.
- Continues to be evolved through lessons learned after each planning cycle.
- The tool and usage was assessed by ORR and Nichols in advance of SoFA. ORR and Nichols were supportive.
- ABPT was used by all DUs to underpin their CP6 numbers, for the SBP submission.
- Assurance of these submissions was conducted and covered; completeness, commentary, deliverability and strategic alignment.

Asset Management Demand Model

Further developments in Network Rail's commitment to unlocking the answer to understanding comparable productivity has led to a project looking to develop a management information support tool that will look at the end to end process of how demand for work is generated, levels of productivity that are achievable and workforce planning required to deliver this, this project will sit alongside and complement the ABPT within routes.

This solution will provide insight and functionality to be integrated into the Network Rail planning process and ultimately drive more robust management decisions based on evidence and data. Figure 1 (below) shows the areas which will be considered as inputs to the resourcing model and outputs.

The methodology will ensure requirements are scoped at both a central and route level and apply best practise modelling standards so that the model can be embedded within the organisation. Model development and underlying analytics will align to the following principles:

- **Capture input drivers to resource demand** - Cover the demand drivers of the route businesses end-to-end from asset to delivery.
- **Reflect differences in teams and geographies** - Encompass the different drivers of demand and productivity across the routes, delivery units and local areas.
- **Be data and evidence driven** - Bring together data and information enabling informed, evidence-based decision making.
- **Follow a robust methodology** - Scientific approach and logical build supported by clear analysis and data flow.
- **Provide ability to test and explore** - Scenario planning to provide routes with the capability to test a wide range of options for changing working practices.
- **Be easy to use and maintain** - Lasting solution that does not require expert users and is easy to use and maintain.

The purpose of the model is to provide the following benefits:

- **Enable evidence-based discussions** at all levels by providing evidence of asset management demand, productivity and capacity
- **Facilitate informed decision making** by providing evidence and transparency of asset managing decisions at route and DU level
- **Remove inefficiency within the business** by providing a focus on the efficient use of resources and identifying key efficiency levers throughout the business areas

These benefits will be realised by the model allowing answers to the following questions:

How does policy drive demand?

- What implications do changes in key maintenance and operations policy have on demand requirements?
- How do access and other business constraints impact demand across different routes and DUs?

What levels of productivity are achievable?

- How does productivity compare across similar DUs?
- What is the effect of factors such as travel times, shifts or team set-up on achievable productivity?

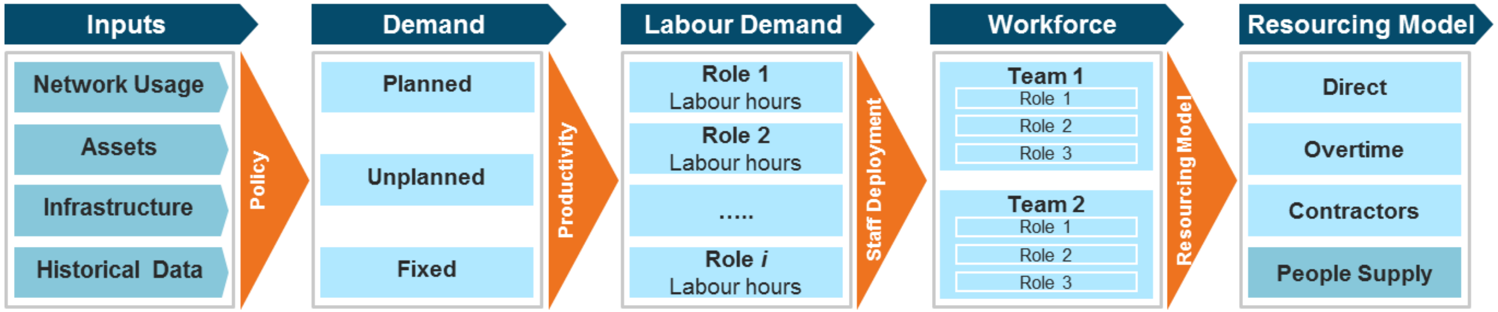
Are we optimally resourced to serve demand?

- How do resource requirements change in response to changes in T&Cs, the time for safety briefings, rostering and team set-up?

What is the right resourcing model?

- When is the right time to use contractors vs. overtime?
- What is the gap between people supply and demand?

Figure 1 – High level model structure that will allow end to end scenario planning



Network Rail's response to ORR's Draft Determination:

Our approach to assessing Network Rail's efficiency and wider financial performance in CP6

31 August 2018



Executive Summary

Our key areas of concern in relation to this consultation are:

1) ORR's proposal for an efficiency index is misnamed and confusing to stakeholders
2) ORR's proposal to not include asset management driven scope reduction as an efficiency (such as rail milling)
3) The complexity of translating CP6 plans at this stage and loss of comparability in moving towards a CPI based index in CP6

ORR's conclusions setting out their intended approach to assessing Network Rail's efficiencies and wider financial performance in CP6 addresses some of the concerns and comments that we made in our response to their consultation earlier this year.

We are encouraged by ORR's proposals to work with Network Rail to understand what information is currently used by management to run the business and to streamline the regulatory reporting. We also welcome that the proposed focus on route-based reporting is compatible with our commitment to devolution and increasing local accountability.

However, we also think a number of our concerns have not been fully addressed, which are set out below:

1) **Labelling cost movements as "efficiency" is misleading:** ORR's proposed calculation is not an adequate proxy for organisation or route performance in delivering efficiency. Unit costs form the heart of the measure but as the ORR notes in the consultation the importance of factors in driving movements. There are a number of reasons why the average unit cost of a portfolio might move, of which efficiency is one. Whilst we will explain through fishbone analysis what has led to changes in costs, such subtleties will be lost beneath the headline result. The calculation mechanics are particularly inappropriate without a change in name. We propose that the measure should be named: "cost movement index", which will avoid any potential confusion. We will separately identify the impact that cost efficiency in both delivery and scope such as facilitated by new technology such as rail milling.

2) **Mechanics of the efficiency calculation**: ORR's conclusions include some guidance on how efficiencies should be calculated which we do not think is appropriate or consistent with the previous methodology agreed, most notably that reductions in planned renewals arising from sound asset management decisions would not be considered an efficiency. The proposed calculation mechanics are particularly inappropriate without a change in the name of the measure. We will separately identify the impost on cost efficiencies in delivery and scope, such as those facilitated by new technology such as rail milling. We are looking at ways of aligning the calculation to movements in unit costs.

3) **Inflation index – RPI vs CPI:** In CP6 income will be uplifted by CPI rather than RPI. ORR is proposing to use CPI as the uplift factor for cost baselines when considering efficiencies. It doesn't follow that changing the method of inflating income will change how costs will increase and represents a significant departure from the current method of assessing efficiencies. This removes the ability to compare costs over a long period of time thus diminishing the usefulness of the efficiency measure. In addition, plans for CP5 have been created against RPI. Translating the plans at this stage will be complex and may reduce route ownership. Headwinds will need to significantly increase to reflect the change of approach.

We will work closely with ORR over the coming weeks to engage in meaningful dialogue on resolving the above concerns as we all prepare for the challenges of CP6.

The remainder of this response provides comments on specific aspects of ORR's conclusions document, where we continue to hold a different view.

Detailed response

1) Assessment and reporting of Network Rail's efficiency improvements

Whilst ORR have acknowledged Network Rail's suggestion that the measure should be referred to as the: "cost movement index" ORR still wish to use the term "efficiency", on the basis that they think it is a more easily understood term and that changes in cost can be explained through Network Rail's fishbone analysis to highlight cost movements that are not due to efficiencies.

We disagree with this rationale. The term "efficiency" is emotive and means different things to different people, especially when considered in financial terms. For example, Network Rail has encountered difficulties explaining the "efficiency" story to internal and external stakeholders due to their preconceptions of what "efficiency" means to them. Whilst ORR contends that the term efficiency may be understood by stakeholders it is not reflective of what the calculation is actually measuring. Movements in unit costs between routes and between years is much more reflective of the variation in scheme unit costs and not changes in delivery efficiency. Movements in the index should be explained each year and the efficiency element identified, along with other factors, such as changes in scope, customer demand, asset management considerations and externalities.

Whilst the fishbone analysis will be able to explain the reasons for the cost movements, this extra level of analysis and understanding will probably only apply to a limited number of people, with most users of the information focussing on the headline "efficiency" figure reported.

2) ORR's intended approach on efficiency reporting

ORR notes that baselines used to assess performance should be uplifted by CPI. As noted above, just because income is changing from being RPI-uplifted to CPI-uplifted in CP6, it does not follow that Network Rail's underlying costs are affected by this change. Also, the efficiency targets included in the SBP are predicated upon baselines being uplifted by RPI. Changing to a CPI basis should result in a corresponding re-working of these efficiency targets.

ORR also notes that the baseline for Opex, Maintenance & Support should be the costs in 2018/19. We recognise the value in using a simple base year to calculate movements against. However without a name change, the measure would become more misleading for stakeholders. In CP5, neutral baseline increases were made for agreed headwinds such as the extra maintenance costs arising from the electrification of large parts of the network. For CP6, if ORR renames the measure "cost movement index", we agree with the suggested approach not to make neutral increases to the baseline but to instead separate identify such factors in the fishbone analysis.

The fishbone analysis will help identify why costs have increased between CP5 and CP6. These will include: asset management policy choices, changes in accounting treatment to align to DfT accounting policies, level of traffic on the network, increased scope and activity. These have been set out in the SBP. ORR has agreed a series of increases to costs as a result of scope changes and headwinds within their draft determination, these are not reflective of a reduction in efficiency and should not be presented as such.

ORR notes in footnote 6 of its conclusions document that "costs avoided by not doing planed renewals would not be an efficiency". This represents a change in the principles and method of the efficiency calculation. Scope efficiencies arising from sound asset management decisions that result in long-term savings for the industry have always been eligible for inclusion in the assessment of efficiencies and financial performance. As per our SBP, we should separately report scope efficiency (such as delivered by a new technology like rail milling, Eddy Current or ultrasonic measurement of track condition).

In addition, changing asset condition, customer requirements and developments in how we will be funded by government in CP6 (moving to annually managed budgets), will all be factors impacting the decision-making when considering the optimal workbank. Therefore, the term "efficiency" does not accurately describe the movements in our costs from these types of issues.

3) Using CPI to uplift cost baselines in CP6

Whilst ORR acknowledges the impact that using RPI or CPI as the factor for inflating baselines can have, it has concluded that it will use CPI. This will be consistent with the move to revenue being CPI-uplifted for CP6.

However, if revenue moves by CPI it does not follow that costs will also move by the same index. "Efficiency", as ORR has previously measured it, has been calculated using RPI as the uplift factor. Retaining RPI for CP6 allows for a comparison of costs and performance across multiple years and control periods, which is one of the key objectives of efficiency reporting as set out in the ORR's Summary section of its conclusions document. We are concerned that changing the method to using CPI will distort the ability to compare costs and performance between CP6 and the preceding years.

Also, whilst we understand that the fishbone analysis will allow Network Rail to explain why costs have moved, most users of the information will focus on the headline "efficiency" value reported through publications such as ORR's monitor. There is a risk that the subtleties of what has caused the movement in costs will be lost or ignored.

ORR's proposal is a significant change of approach to the current route plans for CP6. When preparing CP6 efficiency and delivery plans, all factors have been assessed in relation to RPI. ORR's draft determination also used RPI in the way it has presented its values. Translating the SBP to a CPI-basis at this late stage in the planning cycle creates a real risk of a loss of ownership by the Routes and will be complex. We have provided analysis to ORR and their independent reporters which demonstrates that the applicable inflation in much of our cost base is best modelled by RPI.

Unless ORR decides to use a term other than "efficiency", it will appear to stakeholders like there is a reduction in Network Rail's efficiency.

Therefore, we still think that using RPI as the uplift factor is most appropriate for the purposes of assessing financial performance.

An alternative approach might be to use a hybrid approach to uplifting baselines, using different indices for different elements of Network Rail's cost base, depending on what the drivers of cost are agreed to be. Whilst this would make the calculation more complex to administer, it would give more useful and accurate information, allowing the regulator and other stakeholders to better understand Network Rail's financial performance

Other responses:

4) Additional information for reporting in CP6

ORR refers to their intention to work with Network Rail to understand how existing information is used by management to make decisions and run the business. We welcome ORR's pragmatic approach to this matter.

We also welcome ORR's intention to help Network Rail understand how it monitors the efficiencies of Highways England, who are, like Network Rail, an arm's length body reporting into the Department for Transport (DfT). The numerous similarities between the two organisations that ORR regulates lend themselves to a sharing of best-practice and consistency when considering the measurement and assessment of efficiency and overall financial performance.

5) Unit cost reporting

ORR has noted our concerns about the limitations of using unit cost analysis to assess efficiency and have agreed to apply caution in the way they use the data to compare financial performance in any comparison between years or between routes. We welcome this approach. Unit costs can have some merit and can act as a guide to prompt further analysis and explanation but should not be used as a measure of efficiency in itself.

Using movements in weighted renewals unit costs can help illustrate how costs have moved from year-to-year or against a baseline, providing a robust, mathematical basis for the calculation, but they do not explain why the costs have changed. We are currently considering ways that the overall method of the regulator's efficiency calculation can be more aligned to movements in unit costs.

6) Approach to deferrals/ acceleration of work

ORR states that good business planning should result in stable workbanks. This is not necessarily true. Workbanks in the railway require an element of flexibility to optimise delivery, reduce passenger disruption and generate efficiencies. This necessitates re-profiling activity between years, and between control periods. An understanding of asset management is fundamental to assessing financial performance making sure that the right work is done to maximise the benefits of investment in the railway. We think ORR should acknowledge the numerous factors that influence how workbanks are managed when considering financial performance.

7) Productivity and leading indicators

ORR notes its intention to work collaboratively with Network Rail to develop productivity measures and leading indicators. We welcome this approach. Agreeing what to measure, how to measure it and what the results mean can help the industry understand performance and look for ways to make improvements in a unified manner.

8) Level and frequency of reporting

We welcome ORR's objective to streamline its financial reporting. This will help to create focus on what really matters, rather than important messages being lost in the volume of information being presented.

Network Rail has already held a productive meeting with ORR on how the Regulatory Financial Statements (which are currently 1,150 pages long) could be rationalised and improved to help users better understand the pertinent messages and how Network Rail has performed financially.

9) ORR's intended approach – wider financial performance

ORR notes that: "financial performance measure will be the main measure for comparing routes' financial performance on route scorecards in CP6." If this approach is adopted it is important to note the reasons for why differences may arise including: exiting CP5 at the position the PR18 assumed, different characteristics and challenges to the railway in each route and the accuracy of efficiency targets set by the regulator for each route in the PR18.

10) ORR's intended approach – regulatory status of efficiency improvements

ORR note that as part of their approach they will review their PR18 efficiency assumptions after the first year of CP6 to consider if the CP5 exit rate has caused a "material issue". Whilst we understand that materiality is a difficult term to quantify (as items can be material by value or by nature) having an idea of the range that ORR might consider to be "material" would be useful to help reduce ambiguity or dispute when we arrive at the end of 2019/20.

Network Rail's response to ORR's Draft Determination: Enhancements in Control Period 6: Roles and Responsibilities

31 August 2018

Executive Summary

In its consultation on roles and responsibilities for enhancements in Control Period 6 ORR describes proposed roles and responsibilities relating to enhancements in CP6 for Network Rail, the Department for Transport (DfT), Transport Scotland and ORR. Following extensive engagement with both ORR and with our principal government funders in the run up to the Draft Determination, Network Rail is in agreement with the roles and responsibilities that are defined in this document.

We expect to engage in further discussion with ORR, DfT and Transport Scotland to agree the details of publications required to fulfil our licence conditions relating to enhancements and to provide transparency on our delivery of enhancement commitments.

ORR's consultation document on roles and responsibilities describes a part of the wider framework required to allow enhancements to be efficiently funded and delivered outwith the periodic review in CP6. In addition, regulatory change control of the PR18 settlement must be established to be fully aligned with the Enhancements Change Control process when the latter has potential impacts on the expenditure, activities or outputs described in Network Rail's plans. We have also noted this in our response to ORR's consultation on managing change and continue to engage with ORR on this topic.

We are also engaging with ORR in their work to develop a wider capability framework which they plan to use in CP6 to monitor Network Rail's capability with regard to enhancements.

Detailed response

England & Wales enhancements – roles and responsibilities

Network Rail agrees with the roles and responsibilities for enhancements in England and Wales described by ORR. We have engaged extensively with ORR and DfT in the run up to the Draft Determination to agree these roles and responsibilities.

We continue to engage with ORR and DfT to agree the suitable content and format of publications we might make in CP6 to fulfil our licence conditions around enhancements and to provide transparency on our delivery of enhancement commitments. We agree with ORR's proposal that this should include only schemes which have received a Final Investment Decision and are committed for delivery. As ORR have stated in their description of their own role, published milestones for delivery of enhancements in England and Wales in CP6 would not be regulated outputs.

Scotland enhancements – roles and responsibilities

Network Rail agrees with the roles and responsibilities for enhancements in Scotland described by ORR.

Further discussions with Transport Scotland and ORR are required to determine the appropriate content and format of an Enhancements Delivery Plan for Scotland in CP6. We agree that this should only include schemes which have received a Final Investment Decision and which are committed for delivery. In Scotland, published milestones may be designated to be Regulated Outputs for the delivery of which ORR will hold Network Rail to account.

We will also engage in further discussions with Transport Scotland and with the ORR to agree the appropriate content and format of a document to describe Network Rail's obligations for schemes which are in the enhancements pipeline for Scotland which have not yet received a Final Investment Decision.

Change control

We agree with ORR's description of its role in the enhancements change control process for both England and Wales and Scotland. The ORR also note that, while enhancements will be outwith the periodic review in CP6, there is the potential for changes to the enhancements baseline in CP6 to affect the PR18 settlement. It is essential that the process for regulatory change control of the PR18 settlement is fully aligned with the enhancements change control process. We have made this point in response to ORR's consultation on managing change and we are engaging with ORR in ongoing discussion on this topic.

Digital Railway

We would expect the roles and responsibilities for enhancements described by ORR to apply in full to Digital Railway schemes.

CP6 Capability framework

Separately to this consultation we are continuing to engage with ORR in their work to develop a wider capability framework which they plan to use in CP6 to monitor Network Rail's capabilities regarding the planning and delivery of enhancements. This framework provides ORR with an objective, repeatable, route-focused mechanism for assessing
Network Rail's capability to undertake its role as the 'Specifier' of Capital Investments in the rail network. Network Rail and ORR already use a range of other capability models to assess other functions, such as delivery of Capital Investment.

Network Rail's response to ORR's Draft Determination: Financial Framework

31 August 2018

Executive summary

The key points we make in our response are:

- We welcome ORR's confirmation that the move from CPI to RPI is a technical change and that it should not affect the funding that we receive in CP6 in cash prices.
- We welcome the budgetary flexibility that has been agreed by DfT. However, this will constrain our ability to adjust budgets between years of the control period, and could mean we are not able to spend all of the money provided by the governments' SoFAs.
- We have updated our proposals for the management of financial risk (the 'Group Portfolio Fund') to address the issues that ORR raised. This includes allocating contingent renewals funding to routes.
- We need certainty over the grant payments that we will receive each year to provide a stable funding environment to allow us to deliver our CP6 plans.

Purpose

1. This document sets out our response to ORR's supplementary document on the CP6 financial framework. Our comments, here, build on the previous responses that we have provided to your earlier PR18 consultations on the CP6 financial framework. We hope that you find our response helpful as you finalise the CP6 financial framework.

Context

2. We recognise that many of the topics in ORR's conclusions are complex and may be of interest to only a small number of stakeholders. However, these issues are very important for Network Rail's financial viability and stability in CP6. For example, ORR's decision about how Network Rail's funding should change each year to take account of the cost inflation we face is a very significant financial issue for CP6.

3. We summarise our views on the most significant issues, below. The rest of this document then sets out our views on the wider range of financial framework issues, which are included in ORR's supplementary document.

Summary of key issues

<u>Proposed change from RPI to CPI as inflation indexation measure</u>

4. Historically, ORR has always allowed Network Rail to increase charges and other contractual payments (including Network Grant) by RPI each year. However, ORR's draft decision is to move to CPI in CP6. This decision is based on RPI no longer being a National Statistic and that the Office for National Statistics (ONS) does not consider that RPI is a robust measure of inflation.

5. We welcome ORR's statement that its decision is a 'technical change' that should have a limited impact on Network Rail (i.e. it should not affect the funding that we receive in CP6 in cash prices). However, ORR should ensure that it has identified all areas of the settlement that this change affects so that there are no unexpected consequences.

6. Our CP6 plan was presented in 2017/18 prices, on the basis that the costs in our plan would be uplifted by RPI to arrive at CP6 funding in cash prices. Therefore, we welcome ORR's draft decision that it will take account of the difference between RPI and CPI in its estimate of our efficient costs, and when presenting values in the final determination.

7. ORR's proposed move to CPI will also have some wider impacts. For example, it will affect how we present financial performance in our CP6 plan. We discuss this issue in our response to ORR's efficiency and financial performance conclusions document.

<u>Budgetary flexibility for Network Rail</u>

8. ORR's draft determination sets out the financial controls framework

(budgetary controls) that will apply to Network Rail at a GB-level in CP6. We have worked constructively with DfT and HMT to develop these controls and we recognise that the arrangements that we have agreed provide greater flexibility than is available to most other arm's-length bodies.

9. We welcome the flexibility that we have agreed. However, these controls will constrain our ability to adjust budgets between years of the control period, and this could mean we are not able to spend all of the money provided by the governments' SoFAs. This is because we will need to hold funding for financial risks that may materialise during the control period so that we do not overspend against our budgets. If risks do not materialise, we may not be able to roll-forward all of the unused funding into future years.

10. We recognise that we can go some way to mitigating the risk of either significant underspending, or overspending, against our budgets by continuing to improve the accuracy and effectiveness of our business planning processes, and our cash flow forecasting. We are already making improvements in these areas and will continue to do so in CP6. We are also developing better ways to assess the degree of financial uncertainty in our plans. These changes are reflected in our approach to financial risk management, discussed, below.

Financial risk management

11. ORR's draft determination accepted our proposed value of the overall level of funding for financial risk of £2.6bn (in 2017/18 prices) – the Group Portfolio Fund. We welcome this. However, ORR's draft decision was to move £856m of centrally-held funding to routes in England & Wales. ORR expects this funding to be allocated to 'contingent renewals'. ORR has also asked us to reconsider how risk funding is allocated between the England & Wales routes, in a way that takes account of routes' financial uncertainty analysis.

12. ORR did not set out its views on the balance between route-held and centrally-held funding in Scotland as discussions with Network Rail and Transport Scotland are still on-going.

13. Our proposals for the governance of route-held funding were accepted by ORR but we were asked to revise our proposed governance arrangements for the remaining centrally-held funding so that there is greater route involvement in decision making. We also need to develop governance arrangements for contingent renewals funding.

14. We discuss our response to ORR's draft decisions on the Group Portfolio Fund in our topic-specific response to the draft determination. However, in summary, we have accepted the reduction in centrally-held funding in England & Wales, and have updated the allocation of route-held risk funding to better reflect the risks that routes face in CP6. We have updated our governance proposals for funding that remains at a portfolio level, and produced proposals for the governance of contingent renewals. We have also clarified the key role that routes will play in deciding how money from the Group Portfolio Fund will be used during CP6.

15. We are continuing to work with ORR and Transport Scotland to discuss how we manage financial risk in Scotland.

Network Grant

16. In its final determination, ORR will set the annual Network Grant payments that will be paid by DfT and Transport Scotland, in lieu of track access charges, to fully fund our expenditure in CP6.

17. We need certainty over the grant payments that we will receive each year to provide a stable funding environment to allow us to deliver our CP6 plan. In CP5, a 'deed of grant' formalised the grant payments that we received from DfT. We also had a separate 'agreement' with Transport Scotland. We are working with both DfT and Transport Scotland to agree how we can formalise the annual grant payments in CP6 so that we have the same certainty of funding as we had in CP5.

Detailed response

1. Introduction

ORR's draft determination included a supporting document, which set out its decisions on a range of financial framework policies in CP6.

The rest of this document sets out our response to ORR's draft decisions on the financial framework. Our comments, here, build on the previous responses that we have provided to your earlier PR18 consultations on the CP6 financial framework.

2. Inflation indexation

ORR draft determination position

Historically, ORR has always allowed Network Rail to increase charges and other contractual payments (including Network Grant) by RPI each year. However, ORR's draft decision is to move to CPI in CP6. This decision is based on RPI no longer being a National Statistic and that the Office for National Statistics (ONS) does not consider that RPI is a robust measure of inflation.

ORR has stated that its decision to move to CPI is a 'technical change' that should have a limited impact on Network Rail (i.e. it should not affect the funding that we receive in CP6 in cash prices). To do this, ORR's draft decision is that it will take account of the difference between RPI and CPI in its estimate of our efficient costs, and when presenting values in the final determination.

ORR's draft determination proposed that it would use an assumption, in its final determination, of the differential between RPI and CPI of one percentage point.

In its draft determination, ORR explained that it did not plan to make any upward adjustment to freight charges for the RPI-CPI differential at the start of CP6. This means that freight charges will be lower in CP6 than they would otherwise have been, under a RPI regime. However, ORR was still considering whether to make any adjustment for franchised and open access train operators' charges.

Our response to ORR's draft determination

We welcome ORR's statement that its decision is a 'technical change' that should have a limited impact on Network Rail. However, ORR should ensure that it has identified all areas of the settlement that this changes affects so that there are no unexpected consequences. There are a range of regulated payments across many different contracts. We are happy to work with ORR to establish the extent of the impact of this change to ensure it does not have a financial consequence we have not considered.

Our CP6 plan was presented in 2017/18 prices, on the basis that the costs in our plan would be uplifted by RPI to arrive at CP6 funding in cash prices. Therefore, we welcome ORR's draft decision that it will take account of the difference between RPI and CPI in its estimate of our efficient costs, and when presenting values in the final determination.

Our own analysis of the differential between RPI and CPI supports ORR's assumption of one percentage point per year. Our analysis was based on historical data and independent forecasts.

ORR's proposed move to CPI will also have some wider impacts. For example, it will affect how we present financial performance our CP6 plan. We discuss this issue in our response to ORR's efficiency and financial performance conclusions document. We are also concerned that customers, funders and other stakeholders will see ORR's move to CPI as evidence that our costs in fact move in line with CPI. These stakeholders may put pressure on ORR and Network Rail to agree to an unachievable efficiency challenge in CP6. Therefore, we ask that ORR make it clear that this move to CPI is not because Network Rail's costs move in line with CPI. The input price analysis we shared with ORR shortly after the SBP found that our costs increase above RPI each year at around RPI + 0.4%.

3. RAB

ORR draft determination position

ORR has decided to maintain a RAB value, in CP6, for each geographical route and for the system operator, together with total values for England & Wales and Scotland. ORR stated that the CP6 opening RAB balances for geographical routes would be based on the values in Network Rail's regulatory financial statements as at 31 March 2018.

ORR has also agreed with our proposal to establish and maintain a RAB balance for the System Operator, with an opening value of £80m (in 2017-18 prices) and that the opening RAB balance of each geographical route including Scotland, would be reduced proportionately.

ORR also explained that it would simplify some aspects of its RAB policy:

- grant funded enhancements will not be added to the RAB in CP6;
- the current RAB roll forward incentive / risk sharing mechanism will not apply in CP6; and
- the spend to save mechanism will be discontinued in CP6.

Our response to ORR's draft determination

We welcome ORR's decision to maintain RAB values for geographic routes in CP6, and that these will be based on the values that have been reported in our regulatory financial statements during CP5. We also welcome ORR's decisions to use our proposed value of the opening RAB for the system operator of £80m (in 2017/18 prices).

We think that the main elements of the regulatory framework should be maintained to provide flexibility for potential future changes to the company's structure and funding approach. However, we also agree that the changes in our funding arrangements for CP6 mean that it is appropriate to simplify aspects of ORR's policy associated with the RAB. The changes that ORR propose are sensible and will still allow these areas of policy to be re-instated if Network Rail's funding approach changes.

4. WACC

ORR draft determination position

ORR's draft determination set out its assessment of Network Rail's weighted average costs of capital (WACC) for CP6. ORR's estimates are:

- 2.5% to 3.1% for real (RPI) vanilla WACC
- 2.8% to 3.5% for real (RPI) pre-tax WACC
- 1.3% to 1.6% for real (RPI) pre-tax cost of debt

Our response to ORR's draft determination

Whilst the WACC is not directly used by ORR to calculate our CP6 funding settlement, it is still important that ORR's estimates are robust. This is because the WACC is used elsewhere in regulated agreements. For example, the cost of debt is a key input into the calculation of the Crossrail Supplemental Access Charge that we will receive from December 2018.

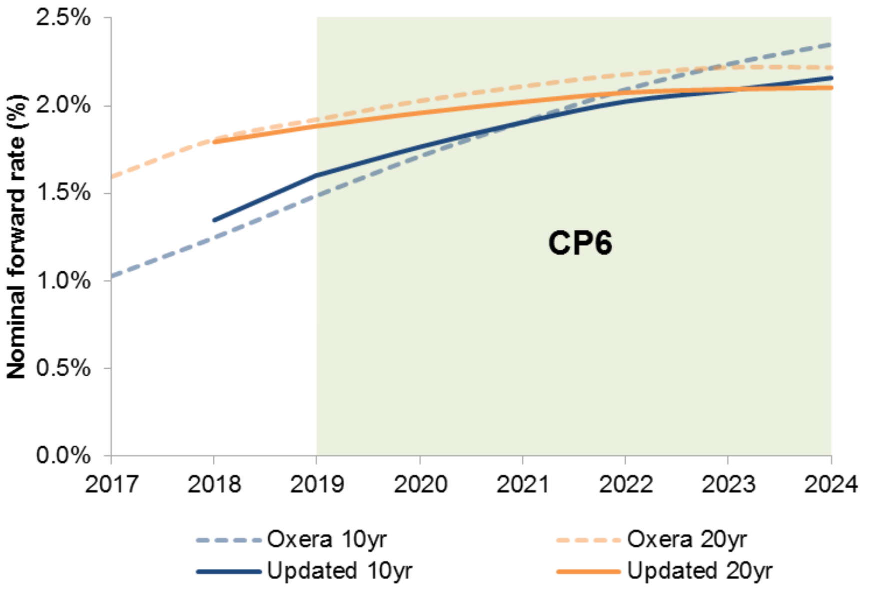
In our SBP, we provided ORR with our own analysis of the hypothetical cost of capital we might face if we were financed in the private sector (without government support) by a mix of debt and equity. Our analysis was based on analysis from Oxera and gave the following ranges:

- 2.8 to 3.4% for real (RPI) vanilla WACC;
- 3.4 to 4.2% for real (RPI) pre-tax WACC; and
- 1.4 to 1.8% for real (RPI) pre-tax cost of debt

Oxera's analysis took place in summer 2017 and so we have reviewed the key assumptions from that analysis to consider whether the WACC ranges in our SBP are still appropriate.

The main time sensitive input in the Oxera analysis was the forward-looking premium component of cost of new debt. This used market data at the time of Oxera's report. We have now reviewed the latest market data on forward-looking premiums, which is presented in Chart 1, below.

Chart 1: Changes in forward looking premiums (summer 2017 vs. summer 2018)



The latest market data suggest that implied CP6 forward rates have fallen very slightly since Oxera completed its analysis. Whilst interest rates over the last year have developed broadly in line with Oxera's expectations, implied yields on 10-year and 20-year nominal government bonds at the end of CP6 are now expected to be slightly lower (between 10 and 20 basis points) than those included in Oxera's analysis.

Given the uncertainty in forecasting interest rates five years ahead, and the very small changes in market expectations, we still think that our SBP assumptions for both the cost of debt and WACC are appropriate for CP6.

5. Other Single Till Income (OSTI)

ORR draft determination position

ORR has decided to simplify the categories of income in OSTI so that it does not include income that is regulated through the periodic review process.

Our response to ORR's draft determination

We agree with ORR's decision to simplify the categories of income that sit within OSTI. By removing, from OSTI, income set by ORR at each periodic review (e.g. freight and open access track access charges. and stations long term charges), it leaves a logical set of income streams in this category that should help stakeholders better understand the role of OSTI.

6. Asset disposals

ORR draft determination position

ORR has decided to apply a common RAB adjustment policy to all Network Rail asset disposals in CP6. The approach ORR has chosen to adjust the RAB is to deduct actual sales proceeds (subject to the possibility of bespoke treatment in exceptional circumstances). ORR also states that the transfer of assets between routes should be recorded using the scaled replacement cost basis.

RAB adjustments for asset disposals would be included in Network Rail's Regulatory Financial Statements and a forecast of disposal proceeds will be treated as OSTI in ORR's determination.

Our response to ORR's draft determination

We accept that it may be appropriate to adjust the routes' RABs for material sales of our assets in CP6. However, we disagree that:

a) the adjustment should be based on sales proceeds; and

b) there should be no de minimis threshold for any adjustment.

Our view continues to be that any RAB adjustment should be based on an estimate of the replacement cost of those assets, which is scaled to the value of the RAB (consistent with the approach being adopted for the disposal of the Wales Core Valley Lines). This approach would provide an incentive to maximise proceeds from disposals because the RAB reduction would be lower than the sales price, if we are able to sell an asset for more than its estimated RAB value.

If ORR adjusts the RAB by the sales prices of a disposal, this will reduce the value of the RAB by more than that asset's effective RAB value (i.e. 'over-adjust' the RAB downwards), which could have an impact on our statutory accounts – the RAB is still used as the basis for the valuation of our railway assets.

We think that a de minimis threshold should be set at least at the level of asset sales assumed within OSTI. Without such a threshold ORR will double count the value of the asset sale by both adjusting the RAB downwards and reducing the net revenue requirement by the sales proceeds of a disposal.

We also ask that ORR does not double count the value of assets sales in its final determination by including a forecast of CP6 asset disposals in OSTI in its final determination but continuing to include the income from this asset in its forecast of our income.

In concluding its policy in this area, we ask that ORR considers the treatment of asset disposals in other regulated sectors. We think that comparisons with other regulated sectors are still relevant even with our different funding structure.

7. Opex memorandum

ORR draft determination position

ORR confirmed that it will not use the opex memorandum account to log-up payments (e.g. for higher than expected industry costs) for remuneration in future control periods. This is because government funding levels are fixed.

Our response to ORR's draft determination

We understand ORR's decision not to use the opex memorandum account for CP6. In anticipation of this decision, we did not include any income, or cost, relating to the CP5 opex memorandum account in the route revenue requirements in our SBP submission. However we will continue to report on the value relating to the opex memorandum account for financial performance measurement.

8. Risk funds

ORR draft determination position

At the time of the draft determination, ORR was considering the findings of an independent reporter study, which reviewed the role of the risk funds in the current investment framework to assess whether they were acting as a barrier to entry.

Our response to ORR's draft determination

We worked collaboratively with ORR's independent reporter, Arup, in their review of risk funds. Network Rail and ORR are currently discussing the findings of this review with Arup to better understand the key issues and recommendations. We will then develop plans to deliver any requirements that come out of the report.

9. Budgetary flexibility

ORR draft determination position

ORR's draft determination sets out the financial controls framework (budgetary controls) that will apply to Network Rail in CP6.

Our response to ORR's draft determination

We welcome the flexibility agreed with DfT and HMT. We have worked constructively with DfT and HMT to develop these controls and we recognise that the arrangements that we have agreed will provide greater flexibility than is available to most other arm's-length bodies.

However, these controls will constrain our ability to adjust budgets between years of the control period, and this could mean we are not able to spend all of the money provided by the governments' SoFAs. This is because we will need to hold funding for financial risks that may materialise during the control period so that we do not overspend against our budgets. If risks do not materialise, we may not be able to roll-forward all of the unused funding into future years.

We recognise that we can go some way to mitigating the risk of either significant underspending, or overspending, against our budgets by continuing to improve the accuracy and effectiveness of our business planning processes, and our cash flow forecasting. We are already making improvements in these areas and will continue to do so in CP6. We are also developing better ways to assess the degree of financial uncertainty in our plans.

Our understanding of the financial controls framework is that it applies to the entire company (i.e. at a GB-level) and so we are planning on the basis that the Scotland route will face the same constraints as routes in England & Wales.

We have considered the new financial controls framework in developing our proposals for how we plan to manage financial risk through the Group Portfolio Fund (GPF), which is discussed below.

10. Group Portfolio Fund

Our response to ORR's draft determination proposals on the Group Portfolio Fund are set out in our topic-specific response. Please refer to the 'Network Rail's response to ORR's Draft Determination: Group Portfolio Fund' document for our views on ORR's proposals in this area.

11. Re-openers

ORR draft determination position

ORR confirmed its 'minded to' position to retain the re-opener provisions currently included in track access contracts.

Our response to ORR's draft determination

We welcome ORR's decision to retain re-opener provisions.

We recognise that making changes to access charges part way through a control period could be unsettling, and further government funding may not be available. However, we agree that re-openers are an important part of the regulatory framework as the alternative would be to provide Network Rail with sufficient funding to cover all possible risks, however remote. This is unlikely to represent value for money.

Separately, we are currently in discussions with ORR and industry stakeholders about the use of Schedule 8 re-openers during CP6, specifically about creating clarity for when the existing Paragraph 17 mechanism in track access contracts can be used. We consider that this is a particular issue for the Crossrail and Thameslink programmes, since the performance impact of these schemes is currently incredibly difficult to forecast accurately.

12. FIM fee

ORR draft determination position

At the time of the draft determination, ORR was considering whether to propose a change to the fee we pay to DfT for the state financial indemnity of our private sector debt. This 'FIM fee' is currently 1.1% (on an annual basis) of the indebtedness incurred by Network Rail Infrastructure Finance plc that is supported by the indemnity.

Our response to ORR's draft determination

Since the draft determination, we have discussed the issue of the FIM fee with DFT and ORR. The FIM fee is not a requirement of the financial indemnity and, in CP6, the funding flow would be circular (we would receive funding from DfT to pay for the FIM fee and then then pay it back to DfT). Therefore, we are working with DfT and ORR to determine whether we can simplify the arrangements for the FIM fee.

In case the FIM fee is required to be paid in CP6, we carried out an analysis of the difference in yield between GBP-denominated bonds issued by comparable companies (regulated utilities) in CP5 and Network Rail bonds.

We found that the margin between the two spreads has varied over CP5 from 110bps to 160bps. However, the higher end of this range occurred over a relatively brief period in 2016. In fact, over the last 12 months, the average margin between the two spreads was 112bps.

Therefore, if payable, we think that a 1.1% FIM fee would still be appropriate for CP6.

13. Network Grant

ORR draft determination position

ORR's financial framework supplementary document did not specifically discuss the 'mechanics' of how we will receive grant payments from DfT and Transport Scotland in CP6.

Our response to ORR's draft determination

In its final determination, ORR will set the annual Network Grant payments that will be paid by DfT and Transport Scotland, in lieu of track access charges, to fully fund our expenditure in CP6.

We need certainty over the grant payments that we will receive each year to provide a stable funding environment to allow us to deliver our CP6 plan. In CP5, a 'deed of grant' formalised the grant payments that we received from DfT. We also had a separate 'agreement' with Transport Scotland. We are working with both DfT and Transport Scotland to agree how we can formalise the annual grant payments in CP6 so that we have the same certainty of funding as we had in CP5.

Our discussions with DfT and ORR on the mechanics of grant payments in CP6 are ongoing.

14. Calculation of revenue requirements

ORR draft determination position

ORR's draft determination did not include draft route revenue requirements. However, it did set out the tables that it planned to include in its final determination. ORR also confirmed that it will present a 'full' revenue requirement calculation for each geographical route, FNPO and SO in the final determination

Our response to ORR's draft determination

We welcome ORR's confirmation that it will set separate revenue requirements for each route and SO in its final determination. However, ORR's revenue requirements will only cover expenditure directly funded through the SoFAs. This excludes a significant part of our cost base because items such as financing costs, British Transport Police and corporation tax are outside the scope of the SoFA.

We accept that for the purposes of matching expenditure against the SoFAs that it is important to focus on the areas of expenditure that were funded by the SoFAs. However, it is also important that ORR and funders are aware of the forecast values for items outside of the SOFAs so that during the control period, there are no surprises that then impact on the core SoFA funding.

We think that ORR should be transparent about the forecast of our entire cost base, by setting out, in its final determination, Network Rail's total expenditure, including those costs funded outside of the SoFA. By doing this, it will provide transparency to stakeholders and funders of the overall cost of our CP6 plan, rather than focusing on a particular subset of costs that may change from one control period to the next, based on funding decisions from Government.

We are continuing to work with Government to agree the detailed processes and timings for how we notify / forecast amounts covered by the expenditure categories not covered by the SoFAs and how we receive these amounts from DfT.

15. Central cost allocations

ORR draft determination position

ORR is not making any specific changes to Network Rail's central cost allocations but is considering whether there should be changes due to the roles of devolved funders.

Our response to ORR's draft determination

Since the draft determination was published, we have continued to identify ways to devolve services to routes and so charge costs directly. In addition, we are working closely with ORR, Transport Scotland and Department for Transport as part of this review to explain the methodology of cost allocation to routes to help inform ORR's final determination

16. Affordability

ORR draft determination position

ORR's draft determination found both the England & Wales, and Scotland, HLOSs to be affordable.

Our response to ORR's draft determination

Using the details of our response to ORR's draft determination proposals about the income and expenditure in our SBP submission (e.g. the additional £660m efficiency challenge and proposed increase in asset sustainability expenditure), and the latest forecast of our CP6 access charging income, we have reviewed the affordability position in both England & Wales and Scotland.

In summary, we still consider both the England & Wales and Scotland HLOSs to be affordable.

We are working with DfT and Transport Scotland to assess whether the increases in access charging income and Crossrail income improve our affordability position.

Tables 1 and 2, below, set out our latest calculation of the affordability position in CP6.

Table 1: Latest England & Wales affordability position

£m cash prices	**SoFA**	**SBP**	**DD response**	**DD - SBP Variance**
Income				
Network Grant	(24,300)	(24,300)	(24,300)	0
Total Charges	(10,200)	(11,178)	(11,175)	3
Variable charges (inc. EC4T, Station & Depot Income)	0	(5,933)	(6,595)	(662)
FTAC	0	(5,295)	(4,630)	665
Schedule 4 & 8	0	50	50	0
Other Single Till Income	(1,604)	(1,841)	(1,865)	(24)
Other operating income	(1,396)	(1,396)	(1,396)	0
Capital grant for Enhancements	(10,400)	(10,400)	(10,400)	0
Total **Income**	**(47,900)**	**(49,115)**	**(49,137)**	**(22)**
Expenditure				
Operating Costs (inc. BTP)	17,300	20,321	21,769	1,448
Renewals	20,200	18,394	16,967	(1,427)
Enhancements	10,400	10,400	10,400	0
Total Expenditure	**47,900**	**49,115**	**49,137**	**22**
Surplus / (Deficit)	**0**	**0**	**0**	**0**

Table 2: Latest Scotland affordability position

£m cash prices	SoFA	SBP	DD response	DD - SBP Variance
Income				
Network Grant / FTAC	(3,894)	(3,894)	(3,786)	108
Total Charges	(255)	(457)	(565)	(108)
Variable charges (inc. EC4T, Station & Depot Income)	(269)	(467)	(575)	(108)
Schedule 4 & 8	14	10	10	0
Other Single Till Income	(98)	(139)	(140)	(1)
Other operating income	(110)	(109)	(109)	0
Capital grant for Enhancements	(956)	(950)	(950)	0
Total Income	**(5,313)**	**(5,549)**	**(5,550)**	**(1)**
Expenditure				
Operating Costs (inc. BTP)	1,747	1,925	1,819	(106)
Group Portfolio Fund	250	325	325	0
Renewals	2,360	2,349	2,401	52
Enhancements	956	950	950	0
Total Expenditure	**5,313**	**5,549**	**5,495**	**(54)**
Surplus / (Deficit)	**0**	**0**	**55**	**55**

The affordability calculations, above, take the income and cost assumptions in our SBP and adjust for the following changes so that it is consistent with our Draft Determination response:

- additional efficiency stretch;
- reduction in R&D expenditure, compared to the SBP;
- increase in property sales;
- increased asset investment expenditure;
- increased in safety expenditure;
- removal of BTP costs from Scotland;
- inclusion of the performance innovation fund;
- increase in forecast variable charge income;
- inclusion of all Group Portfolio Funding as opex;
- increase in forecast QX income for additional managed stations; and
- changes in other operating income.

In England and Wales, the impact of the adjustments, above, are reflected in a change in the level of FTAC (i.e. the latest CP6 FTAC forecast is lower than the SBP, primarily due to an increase in our latest forecasts of variable charging income).

In Scotland, only the impact of the change in forecast variable charge income has been reflected in the level of network grant / FTAC. The combined effect of the other adjustments leads to a small surplus.

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Network Rail's response to ORR's Draft Determination: Health and Safety

31 August 2018

Detailed response

We have summarised, below, our key points in response to ORR's health and safety supplementary Draft Determination document:

- We agree with ORR's proposals to make £80 million of targeted adjustments to our CP6 plan, relating to additional investment in level crossings and improvements to the safety of access walkways.
- Our proposed additional investment in asset sustainability should address ORR's concern around the identified 'gap' of around £300 million in earthworks.
- We do not agree that our maintenance and inspection activities are targeted at dealing with anticipated failure of assets, rather than preventing failure.
- The introduction of our Intelligent Infrastructure programme should support prevention of asset failure, and reduce the need to react to asset failure.
- We welcome ORR's recognition of the improvement made to our SBP submission in relation to health and safety between December 2017 and February 2018.

Key ORR health and safety challenges

In its Draft Determination, ORR asked Network Rail to consider making the following adjustments to our plan, to increase overall expenditure on health and safety and asset sustainability, whilst reducing our planned expenditure on R&D:

1. LNW and Wales routes to include the 'optional' level crossing spend in 'core' spend (£25m in LNW and £8m in Wales).
2. £25m additional expenditure to upgrade the highest priority user-worked crossings with overlay warning systems.
3. Move the Freight & National Passenger Operator's (FNPO) 'optional' spend of £22 million for basic depot safety improvements into 'core' spend;
4. Recognise that Network Rail Safety Technical & Engineering's (STE) own assurance activity identified a 'gap' of some £300 million in earthworks renewals.
5. R&D fund should be £100m rather than £440m for CP6 to support increased spending on asset sustainability.

ORR's proposed targeted adjustments

As set out in our Safety Response to ORR's Draft Determination, we agree with ORR's proposals to make £80 million of targeted adjustments to our CP6 plan, relating to additional investment in level crossings and improvements to the safety of access walkways. The relevant schemes will be included in our CP6 'core' spend plans.

Asset sustainability in CP6

In its Draft Determination, ORR considered that, in some routes, structures requiring major interventions have been omitted from CP6 plans due to funding constraints, leading to a 'bow wave' of work in future control periods. However, we do not agree with ORR's view. Routes have not omitted structures requiring major interventions in their CP6 plans due to funding constraints and so there would not be a 'bow wave' of work in future control periods.

It is important to recognise that Network Rail will always be financially constrained in what it can spend on OM&R. However, we do recognise that our SBP did not commit to sufficient expenditure on asset sustainability in CP6. Whilst we consider that ORR's proposal to invest £1 billion in additional asset sustainability is too high, we agree that we should spend an additional £538m on asset sustainability in CP6, along with a potential further £188m on reactive earthworks which would be funded through Group Portfolio Fund (GPF) or insurance. The £538m includes an additional £212m on specific renewals (of which £115m was for earthworks renewals) which we included in our SBP as being potentially funded through the GPF or insurance.

We consider that our proposals for additional investment in asset sustainability should address ORR's concern around the identified 'gap' of around £300 million in earthworks. We also consider that our proposed level of CP6 expenditure on additional asset sustainability in England & Wales strikes an appropriate balance with the proposed level of R&D expenditure, and represents an efficient approach to asset management.

We have responded in more detail to each of ORR's proposed changes to our plan (set out under the heading: key ORR health and safety challenges above) in the following response documents:

- Safety Response (points 1 – 4)
- Asset Sustainability response (point 4)
- R&D response (point 5)

The remainder of this response focusses on the other points raised in ORR's health and safety supplementary document.

Asset management in CP6

In its Draft Determination, ORR stated that Network Rail conceded that much of our maintenance and inspection activities are targeted at dealing with anticipated failure of assets rather than preventing failure. We do not agree with ORR's view on our approach to managing our assets.

Network Rail strongly considers that focusing on the prevention of asset failure, rather than reacting to an asset failure, is key to effective asset management. Network Rail has demonstrated significant improvement in our capability in asset management and the quality of the information we use, to reduce service affecting failures (see Asset Sustainability response and R & D trade-off for further details). In May 2018, we launched the Intelligent Infrastructure programme which supports us in having greater data to predict potential asset failures. This is an ambitious programme which provides real-time monitoring of track and S&C assets across the network. The monitoring equipment supports routes in identifying their high-risk assets and allows them to deploy maintenance teams to renew assets prior to failure. The programme is an evolution of several work streams initiated in CP5 which are brought together in a single integrated business transformation programme. This programme rationalises infrastructure condition monitoring and supports routes in making early decisions in relation to maintaining their assets.

We are confident that this programme will deliver both safety and performance improvements in CP6. STE will continue to work closely with routes as we embed this programme during CP6 and to ensure that the benefits are realised. More information on our Intelligent Infrastructure programme is available in our STE SBP, available here.

Additionally, whilst ORR expressed concerns around our overall approach to asset management in CP6, it welcomed our Electrical Safety Delivery Plan which involves targeted investment to areas of greatest risk that would also see the greatest performance improvement. We welcome ORR's view that our approach to overseeing this fund is appropriate for CP6 and that it supports our approach to devolve further investment decision making of this fund to routes in CP6.

Devolution of Network Rail

In its Draft Determination, ORR asked Network Rail to outline how we intended to balance our centralised legal accountability, in particular around health and safety, with the implementation of a devolved route structure.

In 2014, the devolution of Network Rail represented a significant change in the structure of the company. It saw the creation of nine route businesses operating under a national framework. As part of this restructure of Network Rail, we applied our internal organisational change process "Safety Validation" to ensure that we fully considered the safety implications of this change. This ensured that we continued to be compliant with the relevant health and safety regulations.

Maturity of our CP6 plans

We note that ORR considered that there was varying ambition, maturity and understanding of health and safety in the draft individual route strategic plans (RSPs) and central function plans that we shared with ORR.

In particular, ORR expressed concerns around our understanding of what is considered reasonably practicable and the level of detail and maturity in the draft plans for System Operator and Route Services. To address these concerns, STE worked closely with routes to review and improve the understanding in this area and this work was reflected in our February 2018 SBP. Additionally, the System Operator and Route Services had multiple discussions with ORR prior to our February SBP submission to ensure that their SBP plans clearly articulated the role they play in ensuring a safe railway.

We welcome ORR's recognition of the additional work that Network Rail completed following its draft December 2017 SBP. We will continue to work with ORR to resolve any remaining concerns.

We are also pleased that ORR recognises the effectiveness and growing maturity of our internal assurance processes which informed our SBP. In particular, ORR noted STE's challenge to routes on health and safety targets in Route Scorecards and our civils renewals programme as examples of our assurance activities. We will continue to develop and embed our own assurance processes as we progress through CP6.

Deliverability of work

In its Draft Determination, ORR expressed concerns around the level of scrutiny Infrastructure Projects (IP) applied when reviewing its capability to deliver the re-balanced work bank, in relation to the supply chain and gaining access to the network. We assume that ORR is referring to the deliverability assessments that IP and SO completed on renewals and committed enhancements for CP6.

We consider that the deliverability assessments are robust and we have confidence in the outcomes of the reviews. The outcomes of the reviews will continue to be shared with routes and ORR in CP6. Network Rail has already made a number of improvements to the deliverability assessments for CP6. For example, the Deliverability Review Team will now submit a deliverability assessment annually as part of our continuous business planning process. We also plan for our Deliverability Review Team to play a greater role in resolving any concerns around the deliverability of plans at both a route and national level. However, we recognise that further improvements could be made to the deliverability assessments, including the process for undertaking reviews at a route level. We will continue to work closely with ORR as we implement these changes.

Network Rail's response to ORR's Draft Determination: Infrastructure Cost Charges consultation

31 August 2018

Contents

Executive Summary

Key Concerns

Our key area of concern in relation to this consultation is ORR's proposal to change the structure of Fixed Track Access Charges (FTACs) so that the amount of money that we receive would change depending on how many trains we accommodate in the timetable. ORR considers that this change to the charging structure will encourage us to grow traffic levels in CP6. Whilst we welcome receiving more money when we accommodate additional train services on the network, we have the following key concerns in relation to ORR's proposal:

- ORR's proposal has the potential to expose us to an **unreasonable amount of financial risk** in CP6. Therefore, we welcome ORR's recognition that it is appropriate to cap our maximum downside exposure from varying FTACs.
- For this proposal to provide us with a financial incentive to grow traffic on the network, we consider it crucial that any adjustments to charges are informed by our latest **risk-adjusted traffic forecast**, which we have a realistic chance of outperforming.
- We have identified the **Schedule 4 Compensation System (S4CS) as the most appropriate system** for measuring operators' timetabled train miles each year in CP6. However, we need to do further work to confirm whether the data from this system is robust enough for adjusting operators' FTACs. If it emerges that it is not sufficiently robust we are likely to propose to ORR that it should not vary FTACs with timetabled traffic levels in CP6 (e.g. FTACs should continue to be fixed each year like in CP5).
- The level of **uncertainty around current traffic levels is unprecedented** following the May 2018 timetable change. This uncertainty makes forecasting future traffic levels even more challenging than normal and could potentially result in a 2018/19 baseline traffic year that is 'unstable'.
- **We will continue to work closely with ORR** to try and overcome any systems issues and develop an appropriate CP6 traffic baseline on which to base adjustments to operators FTACs.

In its Draft Determination ORR consults on the following key proposals in relation to fixed charges (which it refers to as Infrastructure Cost Charges (ICCs)) for Control Period 6 (CP6):

- Changing the structure of Fixed Track Access Charges (FTACs) paid by franchised passenger operators so that the amount of money that we receive is no longer fixed at the start of the control period. Instead, the amount of money that we receive would change depending on how many trains we accommodate in the timetable.
- Levying fixed cost charges on any new interurban open access services. This charge would be new for CP6, set at £4/train mile and phased-in over the course of the control period.
- Not levying fixed cost charges on existing open access operators in CP6 unless they apply for, and are granted, new access rights.
- Continuing to levy charges designed to recover fixed costs on freight traffic carrying coal, nuclear fuel and iron traffic. However, for the first time, ORR proposes that biomass traffic should also pay fixed cost charges.
- Using the new methodology that we have developed with Brockley Consulting for allocating our fixed costs to train operators

Our response to these key issues is summarised, below, and set out in more detail in the remainder of this document.

Changing the structure of FTACs

We support receiving more money in CP6 through Fixed Track Access Charges (FTACs) when we accommodate additional train services on the network. During PR18, we have highlighted the need to improve the incentives that we currently face to grow traffic. This will be even more important in CP6, given ORR's decisions to remove the Capacity Charge and Volume Incentive.

However, it is important that ORR's proposal is implemented in such a way that it does not expose us to significant financial risk. Our fixed costs, which FTACs are designed to recover, will not vary with traffic levels in the short term. Therefore, if we receive less money through FTACs in CP6 because of this change to the charging framework, we will have to no choice but to reduce our expenditure in other areas (e.g. maintenance or renewals).

Therefore, we welcome ORR's recognition that it is appropriate to cap our maximum exposure to downside financial risk from varying FTACs. ORR discusses an 'upside only' option in its Infrastructure Cost Charges consultation. This would be consistent with the fact that we are unable to reduce our fixed costs in the short term, if traffic levels are lower than expected. However, we recognise that ORR may be attracted to exposing Network Rail to some downside financial risk in CP6 so as to financially incentivise us to grow traffic under more scenarios. We strongly consider that the level of the financial exposure should be significantly less than the £280m (over CP6) set out in ORR's Draft Determination. Based on further discussions with ORR, we understand that this was an error and ORR is considering limiting our financial exposure to approximately £50 million (over CP6). We consider that this level would be much more reasonable, given our limited ability to flex our fixed cost base in response to changes in traffic levels.

For the change in the structure of FTACs to provide us with a realistic financial incentive to grow traffic on the network, it is important that any adjustments to charges are informed by a CP6 traffic forecast that we have a realistic chance of outperforming. We have recently developed an updated risk-adjusted CP6 traffic forecast. We consider that this latest forecast should inform the CP6 FTAC traffic baseline, rather than our SBP traffic forecast (which is now out of date), as it is our latest view of a P50 forecast.

We note that the current level of uncertainty around traffic levels is unprecedented following the May 2018 timetable change. This uncertainty makes forecasting future traffic levels even more challenging than normal. It could also potentially result in a 2018/19 baseline traffic year that is 'unstable'. We consider that this uncertainty around timetabled traffic levels further supports using a risk-adjusted CP6 traffic forecast, and not exposing Network Rail to an undue amount of downside financial risk.

We have identified the Schedule 4 Compensation System (S4CS) as the most appropriate system for measuring operators' timetabled train miles each year in CP6. However, we need to do further work to confirm that the data from this system is robust enough to be used as the basis for adjusting operators' FTACs. If it emerges that it is not sufficiently robust we are likely to propose to ORR that it should not vary FTACs with timetabled traffic levels in CP6 (e.g. FTACs should continue to be fixed each year like in CP5).

We will continue to work closely with ORR with the aim of overcoming any systems issues and developing appropriate CP6 operator traffic baselines on which to base adjustments to operators' FTACs. We suggest that final operator traffic baselines are published ahead of the start of CP6 (i.e. on or before 31 March 2019) but after the final CP6 FTAC price list in December 2018.

Charges for new interurban open access operators

In principle, we support ORR's decision to levy fixed cost charges on any new interurban open access services in CP6. However, we consider that new services should be defined as those for which access rights were applied for after ORR's 2018 Periodic Review (PR18) Final Determination, rather than November 2015. Subject to ORR being confident that its affordability analysis is robust, we are content with the level of the charge (£4/train mile) being proposed, and the decision to phase-in this new charge.

Charges for existing open access operators

We support not levying fixed charges on existing open access operators, unless they start running new interurban services in CP6. When Grand

Central and Hull Trains entered the market, ORR determined that they should only pay variable charges and not fixed charges. It would not be appropriate to subsequently undermine their business models by levying additional charges on them designed to recover our fixed costs.

Freight charges

We support ORR's conclusions to continue to levy charges which recover fixed costs on ESI coal and spent nuclear fuel traffic (although we are not forecasting any ESI coal traffic in CP6). Subject to ORR being confident that iron ore and biomass traffic can bear charges designed to recover fixed costs, we are content with ORR's conclusions in in this area too.

Network Rail's new cost allocation methodology

We support ORR's decision to use the new methodology that we have developed with Brockley Consulting for allocating our fixed costs to train operators in CP6. We consider that this methodology represents a step-change improvement relative to the current methodology used to calculate CP5 FTACs.

We wrote to ORR on 28 August 2018 asking it to approve the recalibration of track access charges that we have carried out for CP6 (letter available on our website).

Detailed response

Passenger services – varying franchised passenger FTACs based on timetabled traffic levels

ORR view

ORR proposes varying FTACs for franchised passenger operators based on variations in timetabled train miles. ORR considers that this should encourage us to grow traffic levels. It considers reflecting changes in timetabled traffic, as opposed to changes in actual traffic, will mitigate the risk of Network Rail facing a revenue shortfall if operators run fewer services than they have planned to, for example, due to industrial action. ORR also considers that this approach should prevent a potential unintended consequence of franchised operators seeking to cancel trains to reduce their FTAC charge.

ORR proposes retaining the existing approach to recovering fixed costs from franchised passenger operators – i.e. they would continue to pay a lump sum FTAC. However, there would be a wash-up payment following the end of the financial year to reflect any difference between forecast and actual timetabled train miles.

Network Rail response

We support receiving more money in CP6 through FTACs when we accommodate additional train services on the network. During PR18, we have highlighted the need to improve the incentives that we currently face to grow traffic. This will be even more important in CP6, given ORR's decisions to remove the Capacity Charge and Volume Incentive.

However, we note that any additional money that we receive through FTACs in CP6 will be unlikely to represent a 'profit' to Network Rail. As the network becomes busier we incur additional Schedule 8 costs that will need to be funded through any additional FTAC income (in CP5 these costs would have been funded through the Capacity Charge).

We have identified the Schedule 4 Compensation System (S4CS) as the most appropriate system for measuring operators' timetabled train miles in CP6. However, we need to do further work prior to ORR's Final Determination to confirm that the data from this system is sufficiently robust to be used for adjusting operators' FTACs. If it emerges that it is not sufficiently robust we are likely to propose to ORR that it should not vary FTACs with timetabled traffic levels in CP6 (e.g. FTACs should continue to be fixed each year like in CP5). We would welcome discussing potential alternative options further with ORR.

We will continue to work closely with ORR with the aim of overcoming any systems issues, and developing appropriate CP6 operator traffic baselines. We suggest that final operator traffic baselines are published ahead of the start of CP6 (i.e. on or before 31 March 2019) but after the final CP6 FTAC price list in December 2018

In its consultation ORR does not set out which iteration of the timetable it envisages adjustments to operators' FTACs being based on. To implement ORR's policy it is necessary to select an iteration of the timetable and then extract from that version of the timetable (using S4CS) the train miles attributable to each train operator. The timetable production process is necessarily a lengthy one, lasting more than a year end-to-end. Throughout this process several different iterations of the timetable are produced.

We have reviewed the timetabling process with the aim of identifying which iteration of the timetable is most consistent with ORR's policy intent of mitigating the risk of us facing a revenue shortfall due to circumstances beyond our control (e.g. industrial action). Following this process, we consider that the New Working Timetable which should be available at D-22 (i.e. 22 weeks before the timetable actually goes 'live') as the most appropriate iteration of the timetable on which to base adjustments to operators' FTACs. We consider this to be the 'cleanest' timetable before potential adjustments for events such as industrial action or severe weather.

We support ORR's proposal to continue to levy FTACs as a fixed lump sum in CP6, with a wash-up payment following the end of the financial year to reflect any difference between forecast and actual timetabled train miles.

Passenger services – Exposure to financial risk due to varying

franchised passenger FTACs

ORR view

ORR considered two options to limit our exposure to financial risk:

- **Set a floor of 5%** (over the control period) for the percentage decrease in a franchised passenger operator timetabled traffic that is reflected in its ICC adjustment; or

- **Not adjusting a franchised passenger operator's ICCs for decreases in its timetabled traffic** (i.e. the adjustment would be upside-only).

ORR proposed setting a 5% cumulative floor over the control period and estimated that this would decrease our overall ICC income by approximately £280m over the control period.

It considers allowing ICCs to vary in response to decreases in timetabled traffic, even if capped, would still provide franchised passenger operators with an incentive to consider removing services that do not maximise the value of capacity.

Network Rail response

We consider that it is important that ORR's proposal is implemented in such a way that does not expose us to significant financial risk. Our fixed costs, which FTACs are designed to recover, will not vary with traffic levels in the short term. Therefore, if we receive less money through FTACs in CP6 because of this change to the charging framework, we will have to no choice but to reduce our expenditure in other areas (e.g. maintenance or renewals).

Therefore, we welcome ORR's recognition that it is appropriate to cap our maximum exposure to downside financial risk from varying FTACs. ORR discusses an 'upside only' option in its Infrastructure Cost Charges consultation. This would be consistent with the fact that we are unable to reduce our fixed costs in the short term, if traffic levels are lower than expected. However, we recognise that ORR may be attracted to exposing Network Rail to some downside financial risk in CP6 to financially incentivise us to grow traffic under more scenarios. We strongly consider that the level of the financial exposure should be significantly less than the £280m (over CP6) set out in ORR's Draft Determination. Based on further discussions with ORR, we understand that this was an error and ORR is considering limiting our financial exposure to approximately £50 million (over CP6). We consider that this level would be much more reasonable, given our limited ability to flex our fixed cost base in response to changes in traffic levels.

For the change in the structure of FTACs to provide us with a realistic financial incentive to grow traffic on the network, it is important that any adjustments to charges are based on a CP6 traffic forecast that we have a realistic chance of outperforming. We have recently developed an updated risk-adjusted CP6 traffic forecast. We consider that this latest forecast should inform the CP6 FTAC traffic baseline, rather than our SBP traffic forecast (which is now out of date), as it is our latest view of a P50 forecast.

We consider that this new forecast is more appropriate because it is based on our latest (May 2018) view of CP6 traffic growth and is risk-adjusted. It is important that we use a risk-adjusted CP6 traffic forecast because our experience in CP5 demonstrates that there is a greater chance of new train services being introduced later than expected, rather than earlier.

There are several examples in CP5 where traffic levels have been lower than expected, at least in part due to reasons beyond our control. We highlight some of these, below:

- The late delivery of train operators' rolling stock fleets, including:
    - Thameslink Cl 700s;
    - Crossrail Cl 345s;
    - ScotRail Cl 385s; and
    - London North Eastern Railway Cl 800s.

- Train operators not running additional services as originally anticipated due to end-of-franchise investment constraints. For example, Arriva Trains Wales' decision not run more services following the Cardiff Central signalling renewal scheme.

- Third party funded enhancements not being delivered in full and/or on time. For example, the investment by Welsh Government to re-double the line between Wrexham and Chester.

- The phasing-in of new Thameslink services to 24 trains per hour (in the peak) through central London more gradually than originally planned.

These factors have contributed to a forecast negative Volume Incentive value in 2018/19 of £163m (£32.6m for 2018/19 multiplied by five as required by the Volume Incentive calculation methodology). This negative value demonstrates how difficult it is to forecast traffic levels to the end of the control period, even on a risk-adjusted basis (which was used for the Volume Incentive in CP5). We are keen to avoid a repeat of this scenario in CP6, particularly given that a reduction in our FTAC income would have an immediate impact on our finances in CP6 (unlike the Volume Incentive which impacts our funding in the next control period).

We also note that the level of uncertainty around traffic levels is unprecedented following the May 2018 timetable change. This uncertainty makes forecasting future traffic levels even more challenging than normal and could potentially result in a 2018/19 baseline traffic year that is 'unstable'. This instability may mean that it is necessary to adjust operators 2018/19 timetabled train miles values before extrapolating a CP6 forecast (e.g. if an operator's May 2018 timetabled train mile values were overstated). We consider that the uncertainty further supports using a risk-adjusted CP6 traffic forecast, and not exposing Network Rail to an undue amount of downside financial risk.

In our response to ORR's consultation on the contractual implementation of PR18, we also propose including a re-opener provision in relation to the baseline timetabled traffic figures for each franchised passenger train operator. It is likely that these baselines will need to be re-opened in CP6 when train services transfer between train operators as part of the re-franchising process. Therefore, there needs to be a mechanism in the contract to amend and supplement these traffic baselines. We also consider that, due to the unprecedented uncertainty in relation to 2018/19 timetabled traffic levels, that this re-opener provision should also provide ORR with the ability to amend operators' traffic baselines for any material and obvious errors in forecast traffic levels that may subsequently emerge in CP6. This is particularly important because even if our aggregate traffic forecast were accurate, it could include inaccuracies at a train operator level. Any such errors would affect those train operators' FTACs, leading to inappropriate levels of charges.

Passenger services – market segmentation

ORR view

ORR proposes defining two market segments for open access operators' services in CP6:

- Interurban; and
- other.

ORR considers that interurban services can afford to pay ICCs in CP6. However, ORR notes that service codes are the lowest level of granularity at which Network Rail can bill passenger operators. Therefore, ORR proposes using service codes (rather than individual services) to allocate train services to market segments.

ORR proposes defining a single market segment which covers all franchised passenger operators. Consistent with this, ORR proposes applying the annual adjustment to franchised passenger operators' FTACs at operator-level (rather than at a lower level of granularity such as service code).

Network Rail response

Subject to ORR being confident that its conclusions are robust regarding the ability of interurban services to pay ICCs in CP6, we support ORR's proposal to define two open access market segments (interurban and other).

As ORR notes in its consultation, the lowest level of granularity at which we can charge operators is service code. Therefore, in CP6 ORR will have to determine whether each relevant open access service code is 'interurban' or 'other' and, as a result, subject to ICCs. If in CP6 new open access services contain a mixture of interurban and other services, operators may wish to separate these into different service codes for charging purposes.

We support ORR's decision to not disaggregate franchised passenger services into multiple market segments. We believe that the ability of all franchised services to pay ICCs is governed by the compensation arrangements set out in franchise contracts, which hold operators harmless to changes in the level of charges resulting from the periodic review process. Therefore, we consider that if franchised passenger operators are not exposed to changes in the level of ICCs in CP6 (i.e. all services are equally capable of bearing these charges) there is no need to further disaggregate this market segment.

We support ORR's proposal to levy franchised passenger ICCs at operator-level. This should be easy for us to bill and reflects the fact that the ability of all franchised passenger services to pay higher charges is governed by the compensation arrangements set out franchise contractors, rather than market conditions.

Passenger services – new open access operators

ORR view

ORR proposes levying ICCs on new entrant interurban open access operators in CP6. It suggests phasing in these charges over CP6 from 0% in the first two years that the new services operate, to 100% in the fifth year of operation.

ORR defines existing open access services as those who had access agreements approved before 26 November 2015, when ORR set out its intention to review charges levied on open access operators.

Network Rail response

In principle, we support ORR's conclusion to charge new interurban open access operators ICCs in CP6.

We also support ORR's proposal to phase in ICCs for new open access operators. However, as set out in more detail, below, we consider that this phasing should also apply to new services run by existing open access operators. We support the phasing profile set out by ORR in its consultation.

Regarding the definition of a "new service" we consider that this should be defined as a service where the application for access rights was submitted after ORR's PR18 Final Determination. It is ORR's Final Determination which will give effect to the final CP6 ICC rates and it is not possible for operators to know what these will be prior to this date. In November 2015 there was no indication by ORR of the potential level of ICCs applicable to open access operators. We consider that it would be inappropriate if the ICC rates set out in ORR's Final Determination were to subsequently undermine the business case for open access services, which have already applied for access rights.

Alliance Rail have raised concerns with us directly that ORR's current definition would capture the London to Blackpool services that it has rights to operate from May 2019, and that the ICC could potentially undermine the business case for these services. Alliance Rail applied for these access rights in October 2017 (ORR approved the rights in June 2018) when the level of the ICC was still unclear. Therefore, it was not possible for Alliance Rail to take the ICC into account when assessing the business case for these new services.

Passenger services – existing open access operators

ORR view

ORR proposes not subjecting existing open access operators to ICCs in CP6, unless they apply for (and are granted) different access rights.

It also states that unlike new open access operators, if existing operators were to run additional services these services would be subject to full ICCs (not phased-in charges) from year one of their modified operation.

Network Rail response

We support not levying fixed charges on existing open access operators, unless they start running additional services. When Grand Central and Hull Trains entered the market, ORR determined that they should only pay variable charges and not fixed charges. It would not be appropriate to subsequently undermine their business models by levying additional charges on them designed to recover our fixed costs.

We are not convinced by ORR's arguments for exposing additional services run by existing open access operators to the full ICC rate, rather than phasing in these charges. It is not clear to us that incremental services run by existing operators are sufficiently different from additional services run by new operators to warrant a different charging approach. If ORR proposes retaining its proposed approach in this area we suggest that it satisfies itself that its approach is not unduly discriminatory.

To make this proposal workable, ORR will also need to clearly define "significant variations" to existing services.

Passenger services – Level and structure of open access ICCs

ORR view

ORR proposes levying ICCs on open access operators as a rate per train mile.

It also states that the level of ICCs for interurban services will be set at £4/train mile.

Network Rail response

We support ORR's proposal to levy ICCs on open access operators as a rate per train mile. The length of a train does not significantly impact the level of our fixed costs and charging per train mile should be relatively straightforward to implement in our billing system.

Subject to ORR being content that its affordability analysis is robust, we are content with the proposed level of ICCs (£4/train mile). However, ORR's analysis in this area may be deficient because it does not appear to reflect the level of track access charges that open access operators are likely to face in CP6. ORR states that the CEPA/Systra affordability analysis was based on CP5 charge levels, excluding the Capacity Charge. A more appropriate approach would appear to have been to use either forecast CP6 charges, or CP5 charges including the Capacity Charge (which would be approximately the same as forecast CP6 charges). We suggest that ORR revisits its analysis in this area to confirm whether its proposal to charge £4/train mile is appropriate.

Passenger services – ORR's access policy

ORR view

ORR states that its charging reforms are likely to only support very limited changes to its access policy and that it will consult on any such changes in due course. Its current view is that the forecast revenue generated through ICCs should be included in the calculation of the revenue generated by the proposed new services when carrying out the Not Primarily Abstractive (NPA) test.

Network Rail response

We welcome ORR's proposal to consult on potential changes to it access policy. However, we consider that it would have been preferable if ORR consulted on this issue at the same time as it was consulting on levying fixed charges on open access operators. This would have enabled operators to take a view on what they are getting in terms of potential additional access to the network in return for paying fixed charges. We support ORR's proposal to reflect the new revenue from ICCs in the NPA test in CP6.

Freight services

ORR view

ORR proposes continuing to levy ICCs on freight services carrying electricity supply industry coal, iron ore and spent nuclear fuel in CP6. ORR states that for these market segments ICCs will be set to maintain the same overall level of variable and fixed charges between CP5 and CP6.

ORR also proposes that, for the first time, the electricity supply industry biomass market segment should pay ICCs in CP6.

Network Rail response

We support ORR's conclusions to continue to levy charges which recover fixed costs on ESI coal and spent nuclear fuel traffic (although we are not forecasting any ESI coal traffic in CP6). Subject to ORR being confident that iron ore and biomass traffic can bear charges designed to recover our fixed costs, we are content with its conclusions in in this area too.

For the avoidance of doubt, we consider that all biomass traffic transported by rail is used for electricity generation and, therefore, plan to charge on this basis. If ORR, or any other stakeholders consider this not to be case, we request that they let us know as soon as reasonably possible.

Network Rail's new cost allocation methodology

ORR view

ORR proposes using the new fixed cost allocation methodology that we developed with Brockley Consulting, excluding the elements of the methodology that allocate non-avoidable costs to services, to set ICCs for CP6.

Network Rail response

We strongly support this decision by ORR and consider that the new cost allocation methodology developed by Brockley Consulting represents a step-change improvement relative to the current approach used to calculate CP5 FTACs. We agree with ORR that it is appropriate to exclude the elements of the methodology which allocate non-avoidable fixed costs to train services. Indeed, in our May 2018 charging conclusions document, we also concluded that these costs should not be allocated to train operators. Instead, we concluded that it would be more appropriate to allocate these costs to funders, reflecting the fact that to a large extent it is funders who specify the parts of the country connected to the rail network, through the franchising process.

Indexation of charges

ORR view

ORR proposes moving to CPI for the indexation of track access charges in CP6, which it forecasts will result in affected charges being inflated by around 1% less per annum than would have been the case under RPI.

Network Rail response

Generally, we welcome ORR's statement that its decision to move from RPI to CPI is a 'technical change' that should have a limited impact on Network Rail (i.e. it should not affect the funding that we receive in CP6 in cash prices). ORR should ensure that it has identified all areas of the settlement that this change affects so that there are no unexpected consequences.

However, we do not agree with the approach set out in ORR's consultation on the contractual implementation of PR18 which proposes uplifting charging rates from 2017/18 prices to 2019/20 prices (the Initial Indexation Factor) using CPI. Our view is that we should use RPI for this uplift (and at the very least for the uplift from 2017/18 to 2018/19 prices) because it should reflect that RPI was used as the measure of inflation in CP5. The way the contract is currently drafting essentially assumes that CPI applied in CP5.

Our concern that if the Initial Indexation Factor remains as is written in the draft contracts, then we will end up receiving less funding in CP6 if ORR does not reflect this lower level of income in our wider settlement.

Price list consistent with ORR's Draft Determination

On 24 August 2018 we published a draft CP6 FTAC price list consistent with the policy set out in ORR's Draft Determination. This price list was published following discussion with ORR to confirm that we had interpreted its Draft Determination correctly. The price list also reflects the improvements that we proposed in our May 2018 fixed charges conclusions document.

We also published a note, alongside the draft FTAC price list, setting out our key assumptions and forecast CP6 FTAC income (available on our website here).

We wrote to ORR on 28 August 2018 asking it to approve the recalibration of track access charges that we have carried out for CP6 (letter available on our website here).

Network Rail's response to ORR's Draft Determination: Managing change

31 August 2018

Executive Summary

We are concerned that ORR has defined a level III change as **any reduction to the core route budget of a route** because we believe this may result in a disproportionate and inappropriate regulatory burden.

We are seeking clarity that the criteria to define change in relation to a **reduction in funding** relate to **changes in route funding for the whole control period**, rather than in relation to an annual expenditure profile.

We are concerned that the Managing Change Policy does not become overly bureaucratic and **allows Network Rail sufficient flexibility** to run its business.

ORR published its conclusions to its working paper on managing change at the same time as the Draft Determination. We are therefore including our response to these conclusions as part of our overall response to the Draft Determination.

Our primary concerns with the conclusions ORR has reached relates to changes to funding. We are pleased that ORR has accepted our proposal to express the criteria as financial thresholds. However, we are concerned that it has rejected our proposal that the criteria to meet a level II or level III change are more significant. Specifically, we proposed that a material reduction in funding below the route/SO base plan should constitute a level III change. We do not agree with ORR's conclusion to define a level III change as any reduction to the core budget of a route.

Route budgets change regularly and decisions to agree changes are often made by our Executive Committee. We continue to believe that unless a level of materiality is applied it will result in a disproportionate regulatory involvement in our regular budgeting process (e.g. a £1 reduction in route expenditure could trigger a level III change process). We do not think this is in line with ORR's aims. Nor do we consider it appropriate that ORR's regulatory reach should extend to opining on day to day budget variations particularly in circumstances where ORR has not set out a clear rationale for needing to do so.

Related to this point, we are seeking clarity from ORR as to the definition of a 'reduction in funding'. Following long-standing engagement with ORR on the management of changes to funding, our understanding is that the criteria to define change relate to a reduction in route funding for the whole control period. This will need to be confirmed in the Final Determination.

We understand that ORR is proposing to publish a 'managing change policy' at around the same time as the Final Determination. The drafting of the network licence includes a provision that Network Rail will comply with all applicable parts of a 'managing change policy' both before and after making any relevant changes. Aligned to our response to the network licence document, our acceptance of a licence obligation to comply with the managing change policy is subject to us agreeing a policy and being comfortable that we can work with ORR proposals ahead of the start of CP6. We will continue to work with ORR in defining and developing the managing change process and have promoted that any associated 'managing change policy' must have provision to be 'updated from time to time', given that this is a newly created process which is yet to be implemented or tested.

Given the timescale in which the policy and process is being considered and developed, and the criticality of the process to Network Rail's ability to properly run its business, we are keen that ORR commits to trialling and testing the process as soon as possible and certainly before the start of CP6. Suggested test cases would be the proposed statutory transfer of Network Rail's operational assets in the Cardiff valleys (Valley Lines) to the Welsh Government, moving accountabilities for an obligation from one business unit to another and changing the boundaries of a route business. We believe ORR should also commit to a review of the managing change process (in addition to a review of the licence) early in CP6. This would enable an assessment of whether ORR's policy operates appropriately and whether any adjustments are needed to reflect the way the business operates. We suggest a review of the managing change process should be timetabled for summer 2019.

More broadly on managing change, we feel there is more to do ahead of ORR publishing its Managing Change Policy later this year to make sure that Network Rail and ORR have a consistent understanding of the requirements and expectations of the process. We will continue to work closely with ORR to develop a process and policy that can be implemented at a practical level.

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Network Rail's response to ORR's Draft Determination: Network Licence Review

31 August 2018

Contents

Executive Summary

Our key area of concern is that the Network Licence (licence) retains an appropriate degree of flexibility to enable our business to function properly. It is therefore critical that the managing change process and supporting policy is developed and tested before licence changes are enacted.
We are supportive of ORR's aims to better reflect our structure in the licence. It is however crucial that the licence is drafted so that it is accessible to those who are accountable for discharging the obligations. We are concerned that this objective has not yet been met.

Since the last modification of the licence at the start of control period 5 (CP5), we were reclassified as a public sector organisation, there has been significant change to our business operating model, development of a control period 6 (CP6) regulatory framework and, consequently, ORR's CP6 regulatory approach. We believe that these factors represent drivers for fundamental change to the licence and that CP6 represents a clear opportunity to better align the licence with our operating model and the CP6 regulatory framework.

We are supportive of ORR's aims to better reflect our structure, particularly across each of our route businesses and the System Operator (SO) and to update the licence more generally to reflect requirements brought about by changes to the CP6 regulatory framework.

ORR has acknowledged that these aims should allow our business and our stakeholders to better understand how the licence conditions apply across the whole network business. One of our key objectives is to have a licence which is drafted with less legalese and that is clearer to interpret and apply so as to make compliance more straightforward for those who are accountable and responsible for ensuring adherence with our licence obligations. We are concerned that the objective has not yet been met and believe that significant opportunities still exist to make the licence more accessible.

The introduction of new obligations is consistent with our expectations of ORR's regulatory approach in CP6. These obligations must be drafted so as to reflect our operating model rather than defining our operations. It is critical that we are not unduly restricted in our ability to make decisions in the interests of efficiency and delivering for our customers and end users. To accommodate this, we are aware that ORR is proposing a managing change process in the event that we wish to make certain changes and we will continue to work with ORR in defining and developing the process ahead of CP6.

The detail of the licence is recognised as being important to deliver ORR's policy aims, and help to embed the roles of route businesses and the SO in the business. Allocation of obligations is complex, particularly where more than one part of the business has an accountability for processes which makes up a system captured by a single licence obligation. The licence will need to recognise this. Network Rail will need to continue to develop strong governance and assurance arrangements between interfacing business functions so that the SO or the relevant route business (as the case may be) can ensure that a relevant licence obligation, allocated to it, is complied with.

Therefore while we are supportive of the principle of embedding the roles of route business and the SO in the licence to reflect the regulatory approach for CP6, we are keen to ensure that the mechanism of allocation allows our business to function properly.

We have been working closely with ORR to consider and assess the proposed modifications to the licence. We are keen to continue this dialogue and for our drafting comments and changes to be discussed and taken into account so that we are in a position to agree to the proposed modifications at the end of this process. It is important that, while meeting ORR objectives, the licence properly represents our business and how we intend to operate during CP6.

Given the intended scale of the changes to the licence and compressed timescales in which these changes have been considered and proposed, we believe ORR should commit to a formal review of the revised licence early in CP6. This would enable an assessment of whether the reform of our existing licence has achieved the desired outcomes and to make any adjustments needed to reflect the way the business operates. We suggest a review should be timetabled for late 2019.

Detailed response

Embedding the CP6 Regulatory Framework

ORR considers that aligning the licence with the devolved structure of Network Rail and ORR's regulatory approach for CP6 will provide additional clarity and consistency. We agree that identifying Network Rail's route businesses and the SO in the licence is important, given the regulatory focus in CP6. We believe it will allow a significant period of stabilisation of route based regulation and an appropriate opportunity to assess its effect.

While we support ORR's policy aims, we believe that the drafting of the licence will be crucial to ensuring that this can provide clarity, not least to Network Rail employees who will need a clear understanding of those obligations relevant to their roles.

We recognise the scale and complexity of change and that our business model has continued to evolve, most recently by the creation of the SO. Deepening devolution is at the heart of Network Rail's strategy, and critical to delivering a safe, reliable, efficient and growing railway for our customers and end users. The licence must support this strategic direction and we would suggest that it would therefore be prudent for a further formal review of the licence early in CP6 to ensure that obligations have been correctly and appropriately allocated and that a revised Licence accords with ORR's regulatory approach and our operating model.

Outside the scope of the licence review, ORR has set out that it wants to make much greater use of effective reputational incentives in CP6 and we support this approach, not least because we believe that they are more likely to influence and change behaviours. It is for this reason that we consider there to be an opportunity for ORR through its autumn 2018 review of its Economic Enforcement Policy and Penalties Statement, to define its approach to targeting a specific business unit to be held to account, should there be an investigation as to a breach of the licence.

We consider that ORR should review train operator licences to ascertain if there is scope for greater alignment in order to support Network Rail's compliance with its obligations, as are set out in the proposed draft licence.

Introduction of new Network Licence obligations

The new conditions proposed by ORR are broadly aligned with our expectations of ORR's regulatory approach in CP6. We provide detailed views in relation to the specific obligations below.

Structure of Network Rail

We are broadly supportive of incorporating conditions which recognise the devolved structure of our business and therefore which reflect ORR's approach to regulation. We are content for the licence to reflect the current structure, provided that it is not unduly restrictive and it does not affect our ability to make efficient decisions about the future organisational structure of Network Rail. Therefore we welcome ORR's decision not to use the licence to refer to a particular number of 'route areas' or to define the specific geographic boundaries of such areas or the structure of the SO. Notwithstanding this, we note that ORR is proposing a managing change process in the event that we wish to make certain types of changes to our organisational structure and we will continue to work with ORR to make sure this is appropriate to the needs of the business. Clearly the suitability of the relevant proposed modifications to the licence must be considered alongside the managing change process.

Geographic route businesses and the SO

We recognise ORR's proposal to oblige Network Rail to designate its network into separate route areas and to maintain businesses to manage those areas. This is reflective of our current operations and we therefore do not object to the principle of this. The same is true of the proposal to specify a Scotland route which is not only reflective of our business operating model but also devolved functions to Scottish Ministers. We note the way in which ORR proposes to deal with our Freight and National Passenger (FNPO) route business in the licence which we discuss in further detail later in this response.

We are supportive of ORR's proposal to require us to maintain an SO function. While today's railway has various organisations which can influence the outputs of the overall system by taking decisions at different levels, we believe that the core of system operation lies within Network Rail.

We would reiterate that we would not expect the effect of the introduction of these licence obligations to restrict us from making efficient decisions, for example, about the structure of route businesses, the geographic areas managed by those route businesses or the operation of the SO, subject to appropriate governance arrangements. We expect ORR's managing change process to give us the ability to progress appropriate changes, in the event that we wish to make them.

When seeking to define the primary accountabilities of a route business or the SO, it will be important that the drafting gives an accurate high level description but that it doesn't seek to be so prescriptive thereby constraining the flexibility we have as a business to define and shape accountabilities as we see fit in the interests of efficiency and delivering for our customers.

Governance

As part of our transformation plan, we have implemented changes to our internal governance arrangements to enable us to achieve our overarching corporate strategies and objectives and hold ourselves to account within a devolved business operating model. We have no objection to including an obligation on Network Rail to maintain and comply with governance arrangements but the obligation should be high level without being too prescriptive, especially while arrangements continue to shape and evolve (for example Railway Boards, formerly known as Route Supervisory Boards). We note that ORR wishes to have further assurance that Network Rail has effective internal governance in place which accord with the principles which ORR has outlined in its draft determination but consider that the required assurance can be obtained through further engagement with us rather than attaching a regulatory obligation to a principle, such attachment which we consider to be disproportionate to the concern ORR is seeking to address.

In addition, ORR also proposes that governance arrangements should enable route businesses and the SO to choose the goods and services which should be procured for the relevant route business. The licence must reflect the position that route businesses and SO have an appropriate level of choice as to the goods and services to be procured for them and how those goods and services should be procured. ORR's proposed drafting does not recognise that those choices are made though existing internal governance arrangements and the changes we propose to the licence seek to reflect those arrangements. Route businesses are empowered to make contracting decisions in respect of goods and services through Route Contracting Panels which fall within a wider framework of governance meetings (attended by route business colleagues together with national functions colleagues) which ascertain at a network-wide level the catalogue of goods and services capable of being procured.

Independent-mindedness of the SO

Within our business operating model, the SO is recognised as a distinct, but connected, part of the organisation that is able to balance the requirements of its internal and external customers (funders, operators and infrastructure managers) with the different outputs that the network can deliver. We have promoted the principle of independent-mindedness of the SO in order that it can fulfil these functions and are establishing a transparent and balanced external governance framework to support this approach. We would not welcome any inference that the SO was separate from Network Rail. We believe that there is significant value in the SO remaining a Network Rail business unit, given the knowledge, information and systems that are available to it from within the business. This enables the SO to draw on the expertise of the wider business to support the most efficient or 'best' use and development of the network for customers and funders.

We of course agree that the SO should not unduly discriminate in the exercise of its accountabilities but we do not consider it is necessary to have an SO exclusive obligation, over and above that which already exists in the licence and relevant competition legislation which is applicable to Network Rail, including its route businesses and the SO.

ORR's proposal includes a requirement that the SO ensures that any confidential information it obtains in the performance of its functions is not used for any purpose other than that for which it was obtained. From a long term planning perspective, while the general confidentiality requirement within the SO may not be problematic, it would be highly impractical and potentially inefficient for data only to be used in one planning activity and could prevent the analysis of similar markets or geographies. The new restriction should allow for information to be used in similar or related activities such as local business case data being incorporated into national models otherwise there is a real risk that advice to decision makers might be incomplete and they therefore might be left less informed that they could otherwise be.

For other SO activities the condition could present more practical difficulties where data obtained at one point of the operating model would be of assistance in another. For instance if the SO was unable to consider such information as may be used as part of the sale of access rights process when seeking to rely on the 'decision criteria' under Part D of the Network Code this would hinder Network Rail's ability to make effective decisions. Therefore we believe the restriction of it being used for any other purpose will need to be further amended or the restriction only applied to a smaller scope of the SO's role. If ORR cannot agree to these amendments then we would suggest removing this proposed condition. We have, and expect to continue to rely on, commercial confidentiality arrangements with applicants and operators to safeguard commercially confidential information as well as continuing to adhere to our licence condition which restricts the disclosure of protected information.

Assets and personnel

We agree with the principle of assigning such personnel and assets to route businesses and the SO in order that those business units can fulfil their accountabilities and thereby comply with relevant licence obligations.

There could be significant practical issues associated with the requirement to allocate and maintain records of allocation of assets unless there is a clear definition of 'Relevant Assets' and what it is intended to include in the licence. We believe that it must be made clear that the assets being allocated or assigned are significant railway assets (such as track, bridges, tunnels and stations) or equivalent operational assets for which routes and the SO are responsible. Our proposed drafting makes this clear. Given the scale of assets owned by Network Rail, we do not believe it an appropriate threshold that an asset is 'relevant' unless it is specifically excluded. We therefore consider that there should be a common sense approach to defining 'Relevant Assets', consistent with current arrangements. ORR, of course, has the ability to request any information which it reasonably requires for the purpose of carrying out its statutory functions. We have suggested some appropriate drafting.

Sufficiency of Resources

Our borrowing in CP6 is capped and we do not have the ability to borrow from the markets therefore, except for capital expenditure funded or financed by third parties, we expect all expenditure during CP6 will be covered by access charges, commercial income and grant from governments. Any obligation on Network Rail to secure the availability of sufficient resources must have regard to all relevant circumstances, including the funding available and our ability to finance our licensed activities. This needs to be acknowledged.

In addition, we may require budgetary flexibility through the managing change process, where necessary, in order to secure that we have sufficient resources to satisfy this obligation. We expect this to be captured as a 'Relevant Change' for the purposes of ORR's managing change policy.

Co-operation

An obligation to secure the cooperation between the business units which constitute Network Rail is a mechanism which we support. It will serve to drive and maintain expected corporate behaviours and is entirely appropriate for Network Rail as a single legal entity. We are supportive of it underpinning our internal governance and compliance frameworks.

Managing change process

We are content that the licence reflects the business operating model and

ORR's approach to regulation in CP6 and consider it absolutely necessary to recognise that the current structure is capable of being changed subject to using a managed change process. We therefore agree with the principle of including an obligation which formally recognises the managing change process, not only to safeguard the benefits of devolution but to allow Network Rail to respond flexibly to changing circumstances.

The drafting of the licence includes a provision that Network Rail will comply with all applicable parts of a 'managing change policy' both before and after making any relevant changes. However we are concerned that the current legal drafting is very negative and therefore the framework could be perceived as being prohibitive rather than enabling.

Our acceptance of a licence obligation to comply with the managing change policy is strictly subject to us agreeing a policy and being comfortable that we can work with ORR proposals ahead of the start of CP6. We will continue to work with ORR in defining and developing the managing change process and have promoted that any associated 'managing change policy' must have provision to be 'updated from time to time', given that this is a newly created process which is yet to be implemented or tested. Given the timescale in which the policy and process is being considered and developed, and the criticality of the process to Network Rail's ability to properly run its business, we are keen that ORR commits to trialling and testing the process as soon as possible and certainly before the start of CP6. Suggested test cases would be the proposed statutory transfer of Network Rail's operational assets in the Cardiff valleys (Valley Lines) to the Welsh Government, moving accountabilities for an obligation from one business unit to another and changing the boundaries of a route business. We believe ORR should also commit to a review of the managing change process (in addition to a review of the licence) early in CP6. This would enable an assessment of whether ORR's policy operates appropriately and whether any adjustments are needed to reflect the way the business operates. We suggest a review of the managing change process should be timetabled for summer 2019.

FNPO Route Business

The FNPO route business is treated as Network Rail's ninth operational route. It is different in nature to the geographic route businesses as it does not directly manage operational assets or control train operations in a geographic area, but delivers these working with and through the geographic route businesses, the SO and other parts of Network Rail.

FNPO has its own revenue requirement in CP6 and will function as an independent route business. It has important accountabilities in respect of defining customer requirements (particularly any new entrants) and developing funding models for network enhancements and developments necessary to drive continued freight and national operator growth on the network.

Given that ORR's articulated rationale for making changes to the licence is to improve clarity about the allocation of responsibilities across the business and to protect the route business and SO financial settlements that are established by PR18, then the representation of FNPO in the licence feels insufficient. However, we acknowledge that the licence sets a high level framework that requires us to structure ourselves to address freight and national passenger operators. To date we have treated FNPO route as a route business and for the avoidance of doubt, we will continue to treat it consistently with the other geographic route businesses, acknowledging that there are distinctions in role. We believe it will be necessary and appropriate to provide considerable guidance so as to avoid confusion to the wider business when interpreting the obligations of the licence holder versus the obligations of a route business.

Allocation of licence obligations

There is a layer of complexity involved when seeking to separate or allocate different obligations to different business units within a single legal entity at the level proposed in the legal drafting of the licence.

The current approach does not recognise where more than one part of the business has an accountability for processes which makes up a system captured by a single licence obligation. We agree that the licence should not identify each individual process in such extensive detail that it becomes an accountabilities matrix. This is particularly true while both interfacing, yet distinct, business units are built and developed and ORR's CP6 regulatory approach evolves. Network Rail will need to continue to develop strong governance and assurance arrangements between interfacing business functions where one business unit owns the overall discharge of an obligation, to ensure that a relevant licence obligation is complied with.

We understand that ORR proposes structuring the licence such that there are three overarching general duties which set out broad outcomes to be met by Network Rail which are fundamental to the role of Network Rail within the industry and which are relevant to the whole network business. We consider that the nature of the 'Network Management Duty and Stakeholder Engagement Duty is somewhat distinct from the Passenger Information Duty. The provision of passenger information is undoubtedly a fundamental role of Network Rail within the industry but we are not convinced by the rationale that its selection as an 'overarching' duty is because it is relevant to the whole network business. If this is an overarching duty as opposed to a network management duty then we believe that other obligations fundamental to the role of Network Rail should form part of the 'core' such as asset management, planning activities and capacity allocation.

As set out previously, in order to make the allocation of accountabilities comprehensible for the business, we consider that the licence should be structured such that the first part includes all those obligations for which the licence holder, including its (FNPO and geographic) route businesses and the SO, shall comply, followed by separate sections in so far as it is possible to break down exclusive accountabilities in a meaningful way. We note that ORR is still considering the best way to structure the licence and we would urge ORR to consider this approach in the interests of making the licence accessible and user-friendly. Currently we do not consider this objective to have been met and the SO and route businesses have raised this as a key concern.

Stakeholder Engagement Duty

Stakeholder engagement is a fundamental part of how we seek to continuously improve our business performance. We want to be able to focus more precisely on, and drive our business by, the needs of our stakeholders. As the owner and operator of the national railway infrastructure, it is our responsibility to treat stakeholders appropriately and reasonably.

We have committed to improving and reporting on stakeholder engagement in CP6 and are taking steps to develop our stakeholder engagement framework. The proposed framework includes:

- creating a shared understanding between routes/SO and stakeholders of the expectations of engagement;
- transparently reporting the outcomes of engagement and how our plans are driven by these; and
- reviewing the quality of engagement on a regular basis to continue to drive improvements.

This is all underpinned by a single code of practice which sets out high level principles about how we will treat our stakeholders. Our Stakeholder Relations Code of Practice (SRCoP) will establish how we will treat our stakeholders in a reasonable way and we want to make adherence to its principles to be a core part of what we do. The purpose of these principles is to clarify our commitment to engagement, create a shared understanding of expectations of engagement and provide a basis from which we can assure the quality of our engagement.

Mindful of the broader aims of devolution, we recognise that it is more important that those who manage stakeholder relationships at the appropriate local, regional or national level determine how best to apply such principles, in order to treat stakeholders in ways appropriate to their needs. The framework therefore allows opportunities for routes and the SO to develop their own processes and innovative approaches to engagement.

We recognise stakeholder engagement as one of our regulatory obligations and acknowledge that while ORR will make full use of our scorecards, there is also a desire to support a step-change improvement in stakeholder engagement. We therefore agree with the principle that a stakeholder engagement duty should be a core and overarching duty in the licence. We agree that the existing stakeholder relationships licence condition is outdated and too narrow therefore we are supportive of the principle of updating the definition of stakeholder in the licence. This is also aligned with our policy aims in our corporate transformation plan.

We consider the current definition in the licence to be too wide. For example the requirement to engage with, "any person who may be impacted by the activities of the licence holder", without logically qualifying that it is a person or organisation who has or is likely to have a significant interface with us, could be construed as covering a stakeholder group that is far broader than is envisaged or intended by ORR. We consider it necessary and appropriate to narrow the scope so that any person who, or organisation which, may be impacted by our activities should also have or be likely to have a significant interface with us. This wording would cover all appropriate stakeholders. We are not clear as to the concern ORR is seeking to address as our drafting proposal captures all stakeholder groups outlined in ORR's consultation. We would ask ORR to be specific as to which stakeholder group or groups it intends to capture by separating the definition.

Our proposed model of stakeholder engagement for CP6 will strive to ensure that our engagement remains effective, inclusive, well governed proportionate and transparent and that it meets stakeholder's reasonable requirements in the circumstances. We support these principles but we have proposed drafting to the licence which reflects these principles at high level. We are concerned that ORR has translated these principles to be prescriptive activities for which regulatory obligations are proposed to be attached and which would form the "Stakeholder Engagement Duty". We consider this to be highly prescriptive and misaligned with ORR's overall approach to removing prescription. We have made commitments in respect of our CP6 stakeholder engagement framework, every aspect over which we are engaging with ORR and therefore we think it inappropriate and disproportionate, particularly in the absence of any evidence as to why such prescription is required.

We believe that the additional obligations which ORR has outlined in its legal drafting should be incorporated in that/those document(s) which form Network Rail's Stakeholder Relations Code of Practice upon which we publicly consulted in the summer and which ORR has the power to direct us to review and revise to facilitate efficient and effective dealings between us and our stakeholders. The licence should remain purposive, enabling Network Rail to continue to determine how best to shape, evolve and develop its stakeholder engagement framework throughout CP6.

Whilst ORR has not presented evidence that this level of prescription is required, if it continues to believe it necessary to follow this approach, we have suggested some further proposed drafting which will provide a more appropriate level of emphasis in the licence but which will not inhibit the development of our stakeholder engagement framework or the devolved business units from improving and enhancing their own processes and innovative approaches to engagement.

Safety and Standards

Our proposal for review of this condition pre-dates the current review of the licence. It is driven by a desire for a complete representation of the standards and requirements which we must take into account in operating our business, in order for our safety management system to be certified or authorised by ORR. There are a wide range of standards and procedures that the industry adopts to ensure safe railway operations. The existing drafting does not reflect the significance of Railway Industry Standards which define the functional or technical requirements to be met in circumstances where the management of the railway system does not need the use of Railway Group Standards. Therefore we believe it does not adequately reflect ways in which we achieve our corporate duties in respect of safety.

We therefore agree with the principle of updating the drafting of this licence condition to reflect our ability to identify and adopt all or part of standards which enable compliance with our obligations.

Management Incentive Plan

We acknowledge ORR's proposal to update the licence condition relating to management incentives and to reflect changes to the structure and status of Network Rail post-reclassification. Government, in its capacity as Network Rail's shareholder, has a role to approve the application of our incentive policy rather than overseeing remuneration which is, of course, a role for Network Rail's Board and Remuneration Committee.

We welcome proposals to promote transparency around performance related pay which is entirely aligned with how we operate our business and designed to incentivise performance. It is critical that Network Rail is able to offer market-competitive packages in order to attract and retain talent, particularly as eighty per cent of recruits come from the private sector where incentive schemes are the norm. We believe that performance related pay linked to clear metrics provides clear incentives for our employees to strive for higher level of performance.

We are supportive of the principle of better alignment with the interests of our customers and end users and we have taken significant steps to enhance such alignment through the development of scorecards. However we believe that the prescription that Network Rail must align incentives exclusively with the interests of its customers and end users is problematic and narrow when considered in the context of a much broader group of stakeholders and the environment in which we operate. Taking reasonable steps to align our policy criteria in this way, may mean that we are not acting in the most efficient or sustainable way and thereby failing to align with the interests of other key stakeholders (including our funders). It is therefore important that any licence obligation should only require Network Rail to balance the interests of its various stakeholders. Therefore our proposal is that alignment should be to our core Network Management Duty, which is fundamental to our business and the interests of our key stakeholders.

Performance related pay remains significantly beneficial for the purposes of recruitment and retention, particularly when considering our senior management population. We consider it more cost efficient to have an element of remuneration 'at risk' depending on the performance of the business and of the individual. Further, we believe that ORR remains a key stakeholder for the application of our remuneration policy, and we welcome the annual input that it provides to our Remuneration Committee in their consideration of whether the scorecard outturn adequately reflects performance in the round during the year. We believe that overall governance is strengthened as a result of ORR's input. We therefore believe that Network Rail should continue to be required to have regard to any views on our performance that ORR may provide.

We note that ORR intends to update some of the terminology used within the licence such that it is relevant for CP6 and to remove reference to the Incentive Policy, which is no longer in place. 'Incentive Schemes' are commonly recognised as 'performance related pay' and therefore we would suggest that this is more appropriate terminology to use on the face of the licence.

Breakdown of Network Licence Modifications

We have separately supplied ORR with a copy of the draft licence which is marked up with our amendments. We have attempted to categorise the amendments below as being those where we are in agreement (green), those where we agree with the principle subject to changes to the legal drafting (amber) and areas where our views in relation to both drafting and principle are not yet aligned (red).

Where we have noted our position as being in agreement, this is of course subject to final agreement of our Board.

Part A Core Duties

Licence condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
Secure the operation, maintenance, renewal etc. of the network to meet reasonable requirements of service providers and funders to the greatest extent reasonably practicable, having regard to all circumstances including ability to finance licenced activities.	1.1-1.2	No change	Network Rail and SO/Route Business	Agreed. However we would ask ORR to formally recognise that "all relevant circumstances" would include the actual funding available to the licence holder.
Provide appropriate information on train movements to train operators to allow them to meet their information obligations to the greatest extent reasonably practicable having regard to all circumstances.	2.1-2.2	No change	Network Rail and SO/Route Business	Agreed in principle subject to legal drafting. The provision of passenger information is undoubtedly a fundamental role of Network Rail within the industry but we are not convinced by the rationale that its selection as an 'overarching' duty is because it is relevant to the whole network business. If this is an overarching duty as opposed to a network management duty then we believe that other obligations fundamental to the role of Network Rail should form part of the 'core' such as asset management and planning activities. The provision of passenger information is, of course, designed to enable train operators to meet their information obligations to passengers whereas meeting those obligations as a result of having that information is in the gift of control of train operators. It is a subtle distinction but one which we believe should be made. We have proposed a drafting change to address this.
Treat stakeholders in ways appropriate to	8.1-8.2	Changes	Network Rail and	We agree that changes are necessary but we do not

Licence condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
their reasonable requirements as stakeholders including to the greatest extent reasonably practicable, with efficiency, economy and with specified degree of skill, diligence prudence and foresight.		proposed	SO/Route Business	agree with the extent of changes proposed in the licence as set out in detail in this response. A further drafting proposal to replace the existing wording in condition **1.7** has been shared with ORR.

Structure of Network Rail

Licence Condition	Changes to Condition	Accountability	Network Rail comment
Ensure its business complies with the requirements set out in the licence	New obligation	Network Rail	Agreed in principle subject to legal drafting. We have removed wording from **2.3(b)** and **2.8(c)** which are obligations rather than functions of the route businesses and SO. We have added this wording to condition **2.1** so that not only shall the licence holder structure its business to comply with this condition but each of its route businesses and SO shall comply with the obligations for that business unit contained in the licence.
Designate its network into geographical route areas with: - Scotland as a route area - England and Wales designated to one or more route area	New obligation	Network Rail	Agreed.
Establish a route business for each route area to: - take primary responsibility for the operation, maintenance, renewal and replacement of the route (excluding SO responsibilities); and - comply with the route business allocated obligations under the licence	New obligation	Network Rail	Agreed in principle subject to legal drafting which we have explained above.
Maintain and comply with governance arrangements to ensure that the route businesses can effectively/efficiently perform their functions, including: - having a responsible officer - choosing how goods/services for the route should be obtained	New obligation	Network Rail	Agreed in principle subject to legal drafting. The drafting changes which we have proposed seek to reflect that a route business can choose the goods and services to be procured and that the governance arrangements provide an appropriate level of choice. Those governance arrangements include internal contracting panels and Network Rail's policy on delegated authorities.
Structure its business to be able to properly take into account the interests of freight and national passenger operators, which may involve establishing a route business for this purpose.	New obligation	Network Rail	Agreed in principle subject to legal drafting.
Establish an SO to: - promote the coordinated and integrated operation of the network and planning for	New obligation	Network Rail	Agreed in principle subject to legal drafting. We do not believe that compliance with obligations is a function as described above. We believe it is more appropriate and logical that it is addressed at the

Licence Condition	Changes to Condition	Accountability	Network Rail comment

the network
- take primary responsibility for:
  ○ Long Term Plans
  ○ The capacity allocation process
  ○ The timetabling process
  ○ Holding/controlling information for those processes
- Comply with the SO allocated obligations under the licence
			outset of the condition at **2.1**.The SO manages the Sale of Access Rights (SOAR) framework within Network Rail including access policies, the sale of access rights process, and the creation of the network-wide timetable. The drafting changes which we have proposed seek to improve the definition of the SO's activities by reflecting the understood operating model.

Maintain governance arrangements to ensure that the SO can effectively, efficiently and impartially perform its functions, including: - having a responsible officer - assessing how goods/services for the route should be obtained	New obligation	Network Rail	Agreed in principle subject to legal drafting. The drafting changes which we have proposed seek to reflect that the SO can choose the goods and services to be procured and that the governance arrangements provide an appropriate level of choice. These internal governance arrangements which exist include internal contracting panels and Network Rail's policy on delegated authorities.
Ensure that there are arrangements in place to suitably protect sensitive information obtained by the SO in performing its functions	New obligation	Network Rail	We agree with the principle of having appropriate arrangements in place to protect sensitive information. In practice these arrangements would often be set out in agreements between the relevant parties. If a restriction is to be included in the licence, then a blanket restriction is unlikely to be workable and could inhibit the effective performance of the SO's functions if it was unable to use information in the context of capacity allocation and timetable planning. There may be scope to limiting any condition to information obtained in discharging specific accountabilities such as long term planning. Even within the scope of long term planning, the restriction on commercially confidential information being used for any other purpose will need to be amended so that the SO can carry out its role completely and efficiently. For example, passenger footfall data may have been provided in respect of a specific section of network or a station when analysing options for access but it may be necessary to use it for wider network planning activity in relation to a neighbouring line in order to be able to best inform a decision by a customer or funder. There are already obligations (both licence and commercial/contractual) concerning the disclosure of protected

Licence Condition	Changes to Condition	Accountability	Network Rail comment
			information. Therefore, while this provision is designed to further assist the supply of information to the SO, we believe it may have the unintended consequence of preventing such disclosure.
Assign personnel to route businesses and the SO to ensure compliance with the licence	New obligation	Network Rail	Agreed.
Ensure sufficient resources available for meeting the reasonable requirements of freight and national passenger operators to ensure compliance with this licence	New obligation	Network Rail	Agreed.
Allocate route assets to route businesses and other assets to route businesses and the SO to ensure compliance with the licence	New obligation	Network Rail	Agreed in principle subject to legal drafting. We understand that ORR's intention is to ensure that Routes and SO have sufficient assets in order to be able to conduct the Network Business. We therefore believe that 'relevant' assets should be defined as being operational railway assets and systems so that the scope is limited to significant assets (generally operational or 'key' assets) necessary to undertake the Network Management Duty.
Maintain appropriate records of assets/personnel assigned, allocated or otherwise used by a route business or the SO	New obligation	Network Rail	Agreed in principle subject to legal drafting. We agree with the principle, subject to agreeing the definition of 'Relevant Assets' such that this does not risk becoming an onerous obligation. We will need to understand from ORR what it would expect to receive that is over and above the asset information it currently receives so we can make sure we have the right records in place.
Ensure that the SO and route businesses provide and receive such cooperation and assistance as is necessary to ensure compliance	New obligation	Network Rail and SO/route business	Agreed.
Act in a manner calculated to ensure it has sufficient resources to enable proper/efficient conduct of the business and compliance with the Act/licence	No change (currently 4.14)	Network Rail and SO/route business	Agreed.
Comply with the managing change process specified by ORR	New obligation	Network Rail	Agreed in principle subject to agreeing the Managing Change Policy and agreeing the legal drafting which we have amended to reflect that change should not be perceived as a negative and the Managing Change Process should be reflected as an enabling framework.

Part B Network Management

Licence Condition	Current Ref	Changes to condition	Accountability	Network Rail Comment
Planning				
Plan how it will comply with general network management duty (see 1.2) over short, medium and long term	1.4	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. For simplicity, the Network Planning Requirements could be contained in the definitions section of the licence (as they are referred to in multiple definitions) and an obligation be included to comply with the Network Planning Requirements
Consult and take into account views when planning	1.5	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. For simplicity, the Network Planning Requirements could be contained in the definitions section of the licence (as they are referred to in multiple definitions) and an obligation be included to comply with the Network Planning Requirements.
Prepare (and provide to ORR) plans, strategies or other documents demonstrating its compliance/proposed compliance with the general duty. These shall include specified documents and shall demonstrate the position, as appropriate, on a network basis and at a suitably disaggregated level. Documents to meet and be provided in accordance with ORR guidelines.	1.6-1.8	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. For simplicity, the Network Planning Requirements could be contained in the definitions section of the licence as they are referred to in multiple definitions and an obligation to comply with the Network Planning Requirements.
Prepare, provide to ORR and publish a delivery plan (to meet ORR guidelines)	1.10-1.13	No change	SO/route businesses to provide a delivery plan for their responsibilities and Network Rail to provide a network-wide delivery plan.	Agreed in principle subject to legal drafting. For simplicity, the Network Planning Requirements could be contained in the definitions section of the licence as they are referred to in multiple definitions and an obligation to comply with the Network Planning Requirements. The definition of 'delivery plan' should also be contained in the definitions section.
Have due regard to long term plans	1.16	No change	Network Rail and SO/route business	Agreed.
Asset Management				

Licence Condition	Current Ref	Changes to condition	Accountability	Network Rail Comment
Develop asset management policies/criteria. Review/revise asset management policies/criteria to ensure they remain sufficient periodically and when directed by ORR.	1.19(a), 1.22	No change	Network Rail	Agreed.
In its development and revision of those policies and criteria, consult the SO and each route business	NEW	New obligation	Network Rail and SO/route business – responsible for making representations where appropriate	Agreed.
Apply those policies and criteria	1.19(b)	No change	Network Rail and SO/route business	Agreed.
Make information available about policies and criteria	1.19(c)	No change	Route businesses for assets allocated to them and otherwise to Network Rail	Agreed.
Maintain appropriate information about relevant assets on a network-wide basis	NEW	New obligation	Network Rail	Agreed in principle subject to legal drafting. We believe that this should be tied into the obligation regarding legal structure and assignment of relevant assets and we need an agreed definition of relevant assets.
SO Decisions				
Ensure the decisions around long term plans, capacity allocation and timetabling are made with appropriate expertise, impartiality and transparency	NEW	New obligation	SO	Agreed in principle subject to legal drafting. We consider that the obligation to secure that any other person does not unduly discriminate should be confined to being within the licence holder so that it is not construed more widely as being anyone capable of making a system decision (i.e. ORR and DfT).
Long Term Plans				
Establish and maintain long term plans, to promote the long term planning objective. Review/amend long term plans periodically and when directed by ORR	1.14-1.15, 1.17	No change	SO	Agreed in principle subject to legal drafting.
Capacity Allocation				
Run a best practice process for managing the allocation of capacity.	NEW	New obligation	SO	Agreed in principle subject to legal drafting. The changes which we have proposed seek to improve the definition of the SO's activities by reflecting the understood

Licence Condition	Current Ref	Changes to condition	Accountability	Network Rail Comment
				operating model. The SO's role within the access rights process is to maintain a framework rather than run the process.
Cooperate with potential providers/funders to identify ways to satisfy reasonable requirement	1.18	No change	SO	Agreed in principle subject to legal drafting. The changes we have proposed are intended to reflect the fact that advice on infrastructure interventions may not be positive. Given the role of SO to provide advice and analysis in support of the franchising process, we believe that the cooperation obligation should extend to franchising authorities.
Timetabling				
Run a best practice timetabling process and where necessary initiate changes to relevant industry processes to enable access planning with a reasonable degree of assurance	1.23	No change	SO	Agreed.
In doing so, (a) use reasonable endeavours to resolve timetabling disputes; and (b) respond expeditiously to urgent timetabling matters.	2.5	No change	SO	Agreed.
Cooperate with train operators to enable provision of information	2.4	No change	SO	This is not an exclusive accountability of the SO. Route businesses and National Control also have a role such that we believe that condition **5.14** should be incorporated in condition **1.4**. The provision of support by Network Rail is, of course, designed to enable train operators to meet their information obligations to passengers whereas meeting information obligations to passengers is in the gift of control of train operators. It is a subtle distinction but one which we believe should be made.
Publish the national timetable of passenger services	2.6	No change	SO	Agreed.
In doing so: (a) establish a process for providing information on relevant timetabling changes ; and (b) apply those	2.7-2.9	No change	SO	Agreed.

Licence Condition	Current Ref	Changes to condition	Accountability	Network Rail Comment
processes to the greatest extent reasonably practicable				
Grant access to information to credible inquiry services	2.10	No change	SO	Agreed.

Part C Information Requirements

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
Information Requirements				
Provide to ORR such information as ORR may reasonably require in the conduct of its functions under Part 1 of the Act.	10.1-10.5	No change	Network Rail and SO/route business – where request made specifically to them	Agreed in principle subject to legal drafting. In Part C, (D and E) of the licence we have made changes to reflect that an obligation is to be discharged by the licence holder "including its Route Businesses and SO" rather than having separate obligations. This follows testing with both Route and SO colleagues who find it unhelpful to have a separate obligation which then cross refers to the main body of the relevant condition. In the interests of making the licence as user friendly to Network Rail as key stakeholder, we would request that our drafting proposals are accepted. Therefore agreed subject to agreeing legal drafting.
Where requested by ORR, route SO MD shall be required to confirm accuracy/completeness of response to request or detail reasons for not giving confirmation.	New	New condition	Network Rail and SO/route business	Agreed in principle subject to legal drafting. We need to understand the circumstances in which ORR would require a route or SO MD to sign off information requests such that this does not become an inefficient and onerous process.
Regulatory Accounts				
Prepare regulatory financial statements for itself and Network Rail Infrastructure Finance (NRIF) in accordance with Condition 11 and Regulatory Accounting Guidelines	11.1-11.2	No change	Network Rail	Agreed.
Prepare accounting records for itself and NRIF in accordance with Condition 11 and	11.3	No change	Network Rail	Agreed.

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
Regulatory Accounting Guidelines				
Maintain (and keep under review) systems of control and governance arrangements to ensure information reported is accurate, complete and fairly presented	11.3	No change	Network Rail	Agreed.
Where requested by ORR, route/SO MD shall be required to confirm accuracy/completeness of statement/record or detail reasons for not giving confirmation	NEW	New condition	Route businesses and SO	Agreed in principle subject to legal drafting. There may be practical issues in Routes/SO being able to confirm accuracy, given that central allocated costs would be managed by Routes/SO.
Make a statement approved by the board certifying the adequacy of its resources for the next 12 months	11.5-11.6	No change	Network Rail	Agreed.
Submit to ORR details of the main factors taken into account in the making of the statement. Including a requirement to consult the route businesses and SO and explain how it has taken into account their views	11.7	New condition (in part)	Network Rail and SO/route business – responsible for making representations where appropriate	Agreed in principle subject to legal drafting. Where ORR is asking for information to be annexed to the Resources Statement that support the statement being made then, given the specific nature of the statement, it is possible to describe the supporting information that is envisaged. We have therefore deleted condition **8.8(c)** because a general 'wash up' provision does not provide certainty as to expectations.
Notify ORR if its directors become aware of circumstances that cause them no longer to have reasonable expectation expressed in the most recent statement and publish that notification	11.8	No change	Network Rail	Agreed.
Procure a report from its auditors answering specified questions in relation to the regulatory financial statements and setting out whether the auditors are aware of any inconsistencies between the statement made by Network Rail and the findings of the auditors	11.10-11.11	No change	Network Rail	Agreed.
Enter into a contract with its auditors including a term that the auditors will provide explanation/clarification of their reports and further information to ORR as	11.12	No change	Network Rail	Agreed.

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
is reasonably required				
Deliver to ORR a copy of the financial statements and other information as soon as reasonably practicable and not later than 1 July following the end of the financial year	11.13	No change	Network Rail	The provision of financial statements and information by 1 July is not practically possible due to National Audit Office timescales and this has been the case for the last two years. We think it unwise to insert a date in the licence that we know isn't achievable (even if rules of interpretation allow us to request consent on a later date). We have therefore proposed alternative drafting to conditions **8.13** and **8.14** which gives ORR assurance that the financial statements will be provided before the end of July (in practice submission is likely to be mid-July).
Publish financial statements within one month of delivery (subject to specified modifications)	11.13	No change	Network Rail	Agreed in principle subject to legal drafting. As per the above comment, we have proposed that financial statements are published by a back-stop date of 31 July which accommodates both Network Rail and ORR reporting timescales.
Periodic and annual returns				
Prepare and provide ORR with an annual return, meeting requirements set by ORR by a specified return date	12.1-12.2	No change	Network Rail	We have proposed amendments which are necessary to ensure that as a business we are reporting on data that we are on notice to collect for a relevant financial year. In the interests of accessibility and making the licence user-friendly, we believe that the practice of consulting the licence holder should be explicitly referred to in this condition.
Where requested by ORR, SO/route MD shall be required to confirm accuracy/completeness of annual return or detail reasons for not giving confirmation	NEW	New Condition	Route businesses and SO	Agreed.
Publish the annual return within one calendar month of the return date	12.5	No change	Network Rail	Agreed.
Prepare and provide ORR with a periodic return at a specified time and for a specified period	12.6	No change	Network Rail	We have proposed amendments which are necessary to ensure that as a business we are reporting on data that we are on notice to collect for a relevant financial year. In the interests of accessibility and making the licence user-friendly, we believe that the practice of consulting the licence holder should be explicitly referred to in this

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
				condition.
Where requested by ORR, SO/route MD shall be required to confirm accuracy/completeness of periodic return or detail reasons for not giving confirmation	NEW	New condition	Route businesses and SO	Agreed in principle subject to legal drafting. We would need to understand the circumstances in which ORR would require a route or SO MD to sign off such that this did not become an inefficient and onerous process.
Reporters				
Comply with an instruction from ORR for the Reporter to inquire and report into specified matters	13.2	No change	Network Rail with SO/route businesses responsible where request made specifically to them	Agreed in principle subject to legal drafting. We have made amendments to reflect that inquiries are more commonly referred to as 'reviews' and have deleted the definition of 'Relevant Matter' which is too narrow.
Enter into a contract with the Reporter meeting specified requirements and to be approved by ORR	13.4	No change	Network Rail	Agreed.
Comply with the Reporter Guidelines	13.5	No change	Network Rail and SO/route businesses	Agreed in principle subject to legal drafting.
Co-operate fully with the auditor	13.6	No change	Network Rail and SO/route businesses	Agreed in principle subject to legal drafting.

Part D Industry Obligations

Licence Condition	Current Ref	Changes to condition	Accountability	Network Rail Comment
Stakeholder Relationships				
Publish information on the principles and procedures by which it will comply with its general stakeholder engagement duty	8.6	No change	Network Rail	Agreed in principle subject to legal drafting. We consider that this should be included in condition **1.7** as it is intrinsically linked to the stakeholder engagement duty. It is not user-friendly to have obligations on the same subject matter in different parts of the licence.
Safety and Standards				
Be a member of RSSB and a party to the constitution agreement	22.1(a)	Changes proposed	Network Rail	Agreed in principle subject to legal drafting. As a general point, we believe that where the licence creates obligations on us to be a membership of an industry body, it would be prudent, for future-proofing purposes, to afford a degree of flexibility to the licence holder to seek ORR consent in the case that it is no longer relevant or appropriate to retain membership.
Comply with the obligations under the constitution agreement and the articles of association	22.1(b)	Changes proposed	Network Rail	Agreed in principle subject to legal drafting.
Exercise rights to ensure that RSSB acts in accordance with constitution agreement	22.1(c)	Changes proposed	Network Rail	Agreed in principle subject to legal drafting.
Comply with the Railway Group Standards Code and Railway Group Standards as applicable to its licensed activities	22.2	Changes proposed	Network Rail and SO/route businesses	Agreed in principle subject to legal drafting. We have proposed amendments so that the obligation is to be discharged by the licence holder "including its Route Businesses and SO". This follows testing with both Route and SO colleagues who find it unhelpful to have a separate obligation which then cross refers to the main body of the relevant condition. In the interests of making the licence as user friendly to Network Rail as key stakeholder, we would request that our drafting proposals are accepted.
Environment				
Have a policy on protecting the environment and management arrangements for giving effect to the policy. Wherever there is a material modification,	23.1-23.2	No change	Network Rail Comment	Agreed in principle subject to legal drafting. In ORR guidance it would be helpful to understand what ORR regards as a 'material modification'.

Licence Condition	Current Ref	Changes to condition	Accountability	Network Rail Comment
this must be promptly sent to ORR				
Act with due regard to the policy and operational objectives and use its reasonable endeavours to operate the management arrangements effectively	23.3	No change	Network Rail and SO/route businesses	Agreed in principle subject to legal drafting. We have proposed amendments so that the obligation is to be discharged by the licence holder "including its Route Businesses and SO". This follows testing with both Route and SO colleagues who find it unhelpful to have a separate obligation which then cross refers to the main body of the relevant condition. In the interests of making the licence as user friendly to Network Rail as key stakeholder, we would request that our drafting proposals are accepted.
Rail Delivery Group				
Become a member of RDG and comply with its obligation under the RDG articles	25.1	No change	Network Rail and SO/route businesses	Agreed in principle subject to legal drafting. We have proposed amendments so that the obligation is to be discharged by the licence holder "including its Route Businesses and SO". This follows testing with both Route and SO colleagues who find it unhelpful to have a separate obligation which then cross refers to the main body of the relevant condition. In the interests of making the licence as user friendly to Network Rail as key stakeholder, we would request that our drafting proposals are accepted.

Part E Restrictions on Activities

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comments
Financial Ringfence				
Shall not conduct business other than Permitted Business, de minimis business or business approved by ORR	4.1	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. We have proposed amendments so that the obligation is to be discharged by the licence holder "including its Route Businesses and SO". This follows testing with both Route and SO colleagues who find it unhelpful to have a separate obligation which then cross refers to the main body of the relevant condition. In the interests of making the licence as user friendly to Network Rail as key stakeholder, we would request that our drafting proposals are accepted. We suggest that de minimis turnover and investment limits are reviewed and uplifted to reflect the impact of inflation.
Not acquire or retain shares or investments other than those specified	4.3	No change	Network Rail	Agreed.
Not have an agreement/arrangement with a cross-default obligation unless specifically permitted	4.11	No change	Network Rail	Agreed.
Not allow encumbrances other than specified arm's length encumbrances or transfer amounts to any affiliate/related undertaking other than in a specified way	4.13	No change	Network Rail	Agreed.
Not declare a dividend without ORR's consent	4.29	No change	Network Rail	Agreed.
Not to make a distribution or redemption/repurchase of share capital without ORR's consent	4.30	No change	Network Rail	Agreed.
Not to make a payment to a funder other than specified payments	4.31	No change	Network Rail	Agreed.
Land Disposal				
Not dispose of land other than with consent or where required by an enactment	7.1-7.2	No change	Network Rail and SO/route business	Agreed.
Not dispose of land unless SO and (where	NEW	New condition	Network Rail	Agreed in principle subject to legal drafting. This is on

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comments
a route business is responsible for the land) the route business have approved the disposal			accountable and SO/route business to comply with condition	the understanding that this provision is intended to reflect the routine engagement between Property and Route/SO colleagues and that it does not reflect Network Rail's internal clearance process, which is already governed internally and monitored by ORR. Separately, we are supportive of ORR's existing commitment to review its Regulatory Arrangements for Land Disposal.
Where seeking ORR's consent to dispose, it must give at least 2 months' notice, providing such information as ORR requires.	7.3	No change	Network Rail	Agreed.
Interests in railway vehicles				
Not to be directly/indirectly interested in the ownership of any railway vehicle in GB	5.1	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. By including reference to Route Businesses and SO in condition **17.1** then those business units could not otherwise cause the licence holder to be in breach of this condition.
Prohibition of cross-subsidy				
Not give any unfair cross-subsidy to, nor receive any unfair cross subsidy from, any affiliate and shall ensure there is no unfair cross-subsidy between the Network Business and any other business of Network Rail	6.1	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. By including reference to Route Businesses and SO in condition **18.1** then those business units could not otherwise cause the licence holder to be in breach of this condition.
Maintain separate accounting records and maintain other accounting records in line with ORR policies and shall allow those accounts to be audited.	6.2	No change	Network Rail	Agreed.
Non-discrimination				
Not unduly discriminate between particular persons or between particular classes or descriptions of person	9.1	No change	Network Rail and SO/route businesses	Agreed in principle subject to legal drafting. By including reference to Route Businesses and SO in condition **19.1** then those business units could not otherwise cause the licence holder to be in breach of this condition.
Restricted use of information				
Not without consent disclose protected information other than where specified	14.1	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. We have proposed amendments so that the obligation is to be discharged by the licence holder "including its Route

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comments
				Businesses and SO". This follows testing with both Route and SO colleagues who find it unhelpful to have a separate obligation which then cross refers to the main body of the relevant condition. In the interests of making the licence as user friendly to Network Rail as key stakeholder, we would request that our drafting proposals are accepted.
Take all reasonable steps to ensure that persons to whom protected information is disclosed use it only for the purpose for which it was disclosed and do not further disclose other than in accordance with the condition.	14.2	No change	Network Rail and SO/route business	Agreed in principle subject to legal drafting. We have proposed amendments so that the obligation is to be discharged by the licence holder "including its Route Businesses and SO". This follows testing with both Route and SO colleagues who find it unhelpful to have a separate obligation which then cross refers to the main body of the relevant condition. In the interests of making the licence as user friendly to Network Rail as key stakeholder, we would request that our drafting proposals are accepted.

Part F Corporate Conditions

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
Corporate governance				
Must follow best practice corporate governance arrangements by: (a) complying with UK Corporate Governance Code; (b) maintaining a board with specified attributes; and (c) publishing specified information required by the FCA	15.1	No change	Network Rail	Agreed.
Incentive schemes				
Implement and comply with the incentive policy referred to in the Network Rail Limited articles of association. Not to change the policy without ORR's consent	16.1-16.4	Changes proposed	Network Rail	Agreed.
Send to ORR and apply a management incentive plan (MIP). Publish statements summarising the terms of the MIP and how the MIP criteria have been applied. Alignment of incentive scheme criteria with the interests of train operators and end users.	16.5-16.9	Changes proposed	Network Rail	A requirement to align our incentive scheme criteria with the interests of train operators and end users may not be wide enough when considered in the context of a much broader group of stakeholders. Taking reasonable steps to align our policy criteria in this way, may mean that we are not acting in the most efficient or sustainable way and thereby failing to align with the interests of other key stakeholders (for example our funders). It is therefore important that any licence obligation should require Network Rail to proportionately and properly balance the interests of its various key stakeholders and we have proposed linking the criteria to the core Network Management Duty.
Maintain, implement and comply with an employee incentive scheme	16.11-16.13	Changes proposed	Network Rail	Agreed.
Fees				
In each year, pay ORR the aggregate of the annual fee determined by ORR and the fair proportion of any CMA reference costs. The payment shall be made within 30 days of ORR giving notice	18.1	No change	Network Rail	Agreed. However, in CP6 we would welcome an ORR review of how its economic functions are funded and whether the cost of economic regulation should be distributed proportionately between Network Rail and Train Operators, given, for example, Disabled People's Protection Policy and Complaints Handling Procedure obligations apply to the industry.

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
Pay a fee for the state financial indemnity	3.5	Changes proposed	Network Rail	We understand that DfT expects to omit the state financial indemnity fee from CP6 funding arrangements due to it effectively being a circular cash flow within government. The drafting will need to be changed to reflect this.
Insurance				
In respect of licensed activities, maintain insurance against third party liabilities in accordance with ORR consent	20.1	No change	Network Rail	Agreed in principle subject to legal drafting. We believe that the drafting should accurately reflect ORR's role in Network Rail's insurance arrangements. ORR consent is not required provided the provisions of insurance fall within the terms of ORR's general approval.
Claims allocation and handling				
Be a party to approved agreements/arrangements for handling claims against operators and the allocation of liabilities	21.1	No change	Network Rail	Agreed.
Not waive rights under claims handling arrangements or vary claims handling arrangements except as provided for in those arrangements	21.2	No change	Network Rail	Agreed.
Regulatory Undertakings				
Procure an undertaking from NRIF requiring it to give financial statements as specified in Regulatory Accounting Guidelines	11.14	No change	Network Rail	Agreed.
Network Rail shall: (a) provide evidence of undertaking from NRIF; (b) inform ORR where directors are aware of a breach of the condition or and undertaking; and (c) to comply with a direction from ORR to enforce an undertaking	11.15	No change	Network Rail	Agreed.
Procure and maintain an undertaking from NRIF about what business it may conduct	4.2	No change	Network Rail	Agreed.
Procure an undertaking from NRIF and subsidiaries around investments	4.3	No change	Network Rail	Agreed.
Procure undertakings from NRIF and subsidiaries around cross-default	4.11	No change	Network Rail	Agreed.

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
obligations				
Procure undertakings from NRIF and subsidiaries around encumbrances	4.13	No change	Network Rail	Agreed.
Procure a specified undertaking from its ultimate holding company on licence compliance	4.16-4.19	No change	Network Rail	Agreed.
Procure a specified undertaking from its ultimate holding company on the provision of information	4.20-4.23	No change	Network Rail	We are not clear as to why ORR has changed Ultimate Holding Company to Ultimate Controller. In addition, the wording of this definition needs to be considered in the context of Network Rail's reclassification as an arm's length body in September 2014.
Procure a specified undertaking from NRIF on the provision of information	4.24-4.25	No change	Network Rail	Agreed.
In relation to undertakings shall – (a) provide evidence of undertakings; (b) inform ORR where directors are aware of a breach of the undertaking; and (c) comply with a direction from ORR to enforce an undertaking	4.26	No change	Network Rail	Agreed.
Not to enter into agreements with ultimate holding company or its subsidiaries where undertaking not there or breached or 4.26 not complied with	4.27	No change	Network Rail	Agreed.
Not to enter into agreements with NRIF or its subsidiaries where undertaking not there or breached or 4.26 not complied with	4.28	No change	Network Rail	Agreed.

Conditions proposed to be removed

Licence Condition	Current Ref	Changes to Condition	Accountability	Network Rail Comment
Financial indebtedness				
Network Rail shall use reasonable endeavours to ensure financial indebtedness of Network Rail, NRIF and any subsidiaries do not exceed prescribed limits	3.1	Removal	Network Rail	We agree that this should be removed to reflect re-classification of Network Rail as an arm's length government body.
Where the above limit is exceeded, Network Rail shall provide ORR with details of steps to end the excess, take those steps and provide evidence of this	3.3	Removal	Network Rail	We agree that this should be removed to reflect re-classification of Network Rail as an arm's length government body.
Network Rail shall provide financial statements confirming it has complied with financial indebtedness limits and notify ORR if there is a reasonable expectation that it might not	3.4	Removal	Network Rail	We agree that this should be removed to reflect re-classification of Network Rail as an arm's length government body.
Financial Ring-fence				
Network Rail shall use reasonable endeavours to ensure it has an investment grade issuer credit rating	4.15	Removal	Network Rail	We agree that this is no longer relevant and should be removed.
Change of control				
If any person obtains control of Network Rail, it shall notify the Secretary of State and ORR as soon as possible	19.1	Removal	Network Rail	We agree that this should be removed to reflect re-classification of Network Rail as an arm's length government body.

Network Rail's response to ORR's Draft Determination: Other single till income

31 August 2018

Executive Summary

The key points we make in this response are:

- We do not think that generating £67m of additional property income is achievable in CP6. However, we have identified £25m of additional property income for CP6. We have provided a separate response to provide further details.
- Our latest forecast of Crossrail supplemental access charge income is £260m to £278m, which is dependent on the cost of debt assumption that ORR includes in its final determination.
- As part of our response, we have provided an updated CP6 forecast of QX income.

Purpose

1. This document sets out our response to ORR's supplementary document on other single till income (OSTI) that formed part of the PR18 draft determination.

2. OSTI covers a number of different sources of income for Network Rail, which are not regulated (i.e. are not set) by ORR as part of the periodic review process.

Our Strategic Business Plan submission

3. As part of our Strategic Business Plan (SBP) submission, route CP6 plans included their CP6 forecasts of OSTI. These forecasts included both income generated by the route and also property income (rental and sales), which was allocated to routes. Our CP6 forecast of OSTI for Great Britain was £2.7bn (in 2017/18 prices).

4. In previous control periods the definition of OSTI was not clear and it included some income that was set by ORR at each periodic review. In our SBP submission, we clarified the definition of OSTI and only included income within OSTI if it was not set as part of PR18.

ORR's draft decisions

5. ORR reviewed our CP6 OSTI forecasts and, with the exception of property income, found no material issues.

6. As part of its assessment of our property income forecasts, ORR commissioned consultants Cushman & Wakefield (C&W) to review our property income assumptions. Informed by C&W's analysis, ORRs draft determination proposed an increase in our CP6 property income forecast of £67m (£26m property rental and £41m development and sales receipts).

7. ORR's draft determination also noted that we omitted from our SBP submission c.£250m of Crossrail supplemental access charge (CSAC) income that we will receive in CP6.

Summary of key issues

<u>Property income</u>

8. We think that generating £67m of additional property income is not achievable in CP6

9. We have identified £25m of additional property income but anything further is not deliverable. This is because:
   a. Station footfall is currently in decline and the SBP has already assumed this reverses. Any further uplift is speculative and introduces additional unmitigated risk for NR on income from managed stations.
   b. Speculative or unexplained growth has been applied to a number of income lines.
   c. The development market is cooling due to wider economic factors and Brexit which are also impacting on our retailers.

10. We discuss our response to ORR's draft decisions on CP6 property income in our topic-specific response to the draft determination.

Crossrail supplementary access charge

11. We have now reflected our CSAC income forecast in our business plan for CP6 and will continue to work with TfL to agree the payment mechanics for this charge, which will start in December 2018.
12. Our CP6 CSAC income forecast is uncertain because it depends on the cost of debt assumption that ORR determines as part of the final determination, and on the inflation measure (CPI or RPI) that ORR uses in its regulation of rail infrastructure operators.
13. Our latest forecast of CP6 CSAC income, including both ORR's latest cost of debt range, and assuming the use of CPI as the measure of inflation is £260m to £278m (in 2017/18 prices).

Qualifying Expenditure (QX) income

14. We have committed to providing ORR with an updated CP6 QX income forecast as part of our draft determination response. This is because:
    a. we had not included the income from the Clapham Junction and Guildford stations, which are now under Network Rail management, in our SBP forecasts; and
    b. at the time of the SBP, we had not completed our benchmarking of the management fee, which is a component of the charge.
15. Our updated QX income forecasts are provided, below. Our CP6 QX income forecast has increased from £339m to £361m (in 2017/18 prices). However, this additional income is almost entirely offset by additional operating costs of the two new managed stations.

Detailed response

1. Our understanding of ORR's draft determination

ORR's draft determination included a supporting document, which set out its assessment of our forecasts of other single till income (OSTI) in CP6.

ORR's draft determination accepted the majority of our income forecasts within OSTI, with the exception of property income.

This response focuses the largest elements of our OSTI forecasts, which are property income (rental and sales), the Crossrail supplemental access charge (CSAC) , and QX income.

2. Property income (rental and sales)

ORR draft determination position

ORR's consultants Cushman & Wakefield (C&W) felt that our property income forecasts were broadly reasonable. However, C&W thought that we should be able to generate more property income than we had assumed in our SBP because it thought that our forecasts of development and sales income were relatively conservative. Reflecting C&W's view, ORR's draft determination assumed that we could generate an additional £67m of property income in CP6.

Our response to ORR's draft determination

We have reviewed the assumptions, which are the basis for the C&W income forecasts and we do not think that generating £67m of additional property income is achievable in CP6.

We discuss our response to ORR's draft decisions on CP6 property income in our topic-specific response to the draft determination. However, in summary, we have identified £25m of additional property income but anything further is not deliverable. This is because:

a. Station footfall is currently in decline and the SBP has already assumed this reverses. Any further uplift is speculative and introduces additional unmitigated risk for NR on income from managed stations.

b. Speculative or unexplained growth has been applied to a number of income lines.

c. The development market is cooling due to wider economic factors and Brexit which are also impacting on our retailers.

3. Crossrail income

ORR draft determination position

ORR's draft determination noted that the (CSAC) income that we will receive in CP6 had been omitted from our Strategic Business Plan.

Our response to ORR's draft determination

As part of the Crossrail project, Network Rail has enhanced and made alterations to its infrastructure and stations, above ground, on the existing rail network (referred to as the 'On Network Works').

In 2008, Network Rail and the Secretary of State for Transport entered into a 'track access option'[1] in connection with the Crossrail Project, which was intended to regulate the arrangements, and any associated liabilities, between the parties involved. The track access option grants a 30-year option to exercise access rights over the Crossrail route and sets out a CSAC to be paid throughout this period to recover certain costs from the On Network Works. The CSAC is due to be charged from 10 December 2018, which follows the practical completion of the On Network Works.

We will continue to work with TfL to agree the payment mechanics for this charge, which will start in December 2018.

We omitted this income from our SBP. However, we provided an initial estimate of CP6 CSAC income to ORR shortly after our SBP submission.

[1] Track access option is available at: http://orr.gov.uk/__data/assets/pdf_file/0003/14844/crossrail-track-access-option-restated.pdf.

Our CSAC income forecast is uncertain because it depends on the cost of debt assumption that ORR determines as part of the final determination because it is a key component of the calculation of the CSAC. It is also dependent on the inflation index that ORR uses in its regulation of rail infrastructure operators (e.g. RPI or CPI).

Our initial estimate of CP6 CSAC income was between £271m and £296m (in 2017/18 prices). This was based on a cost of debt range of 1.4% to 1.8%. However, using the lower cost of debt range in ORR's draft determination of 1.3% to 1.6%, our revised CP6 forecast of CSAC income would be £265m to £283m (in 2017/18 prices).

As part of its draft decisions on the CP6 financial framework, ORR has said that it will change the measure of inflation used to index Network Rail access charges and other regulated payments from RPI to CPI. We understand that this change will also apply to the CSAC in CP6. This reduces CSAC income further to £260m to £278m (in 2017/18 prices) because CPI is around one percentage point lower than RPI.

Our latest forecast of CP6 CSAC income, including both ORR's latest cost of debt range, and assuming the use of CPI as the measure of inflation is £260m to £278m (in 2017/18 prices).

Since we identified the omission in our SBP, we have also been working with ORR and DfT to determine whether this additional income will increase the overall funding we have available for CP6. Our current planning assumption is that the CSAC income will not increase our overall level of funding for CP6. Therefore, we are not currently planning to include expenditure in our CP6 plan that is funded by this income.

4. Managed stations qualifying expenditure

ORR's draft determination position

Managed station qualifying expenditure (QX) covers the day-to-day running costs of providing services and amenities (such as cleaning or refuse collection) at the stations we manage. We recover these costs through QX charges to train operators that use these stations. With the exception of the QX management fee, which covers central support costs and has a profit element, charge levels are not set by ORR and are instead decided via bilateral negotiation between Network Rail and the train operators using the station.

Our SBP submission included a forecast of managed station QX income over CP6 of £339m (in 2017/18 prices). ORR did not identify any material issues with our CP6 forecast of managed station QX income.

However, we committed to providing ORR with an updated CP6 QX income forecast as part of our draft determination response. This is because:

a. we had not included the income from the Clapham Junction and Guildford stations, which are now under Network Rail management, in our SBP forecasts; and

b. at the time of the SBP, we had not completed our benchmarking of the management fee, which is a component of the charge.

Our updated QX income forecasts are provided in Table 1, below, which include the additional income from Clapham Junction and Guildford stations. Following discussions with ORR, we have agreed not to include our latest view of the value of the management fee in this updated forecast because ORR will only determine the value of this fee in its final determination.

Table 1, below, shows our latest forecast of CP6 QX income, which has increased from £339m to £361m (in 2017/18 prices). However, this additional QX income is almost entirely offset by additional operating costs of the two new managed stations. Both Clapham Junction and Guildford stations are located in the Wessex route. Therefore, it is only Wessex that is affected by the updated forecasts.

Table 1: Updated CP6 QX income forecast

£m in 2017/18 prices	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**CP6**
Anglia	3	3	3	3	3	**17**
LNE/EM	8	8	8	8	8	**41**
LNW	22	22	22	22	22	**110**
South East	15	15	15	15	15	**76**
Scotland	5	5	5	5	5	**25**
Wales	0	0	0	0	0	**0**
Wessex	9	9	9	9	9	**43**
Western	10	10	10	10	10	**48**
Total	**72**	**72**	**72**	**72**	**72**	**361**

5. Other income

OSTI also covers a range of other categories of income, including from: depots, facility charges, franchised stations lease income, and open access fixed contractual contribution. ORR did not identify any issues with these areas of income in our SBP submission, and so we have not provided any further information or comment on these sources of income.

Network Rail's response to ORR's Draft Determination: Scorecards and Requirements

31 August 2018

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Executive Summary

Our key concerns in relation to ORR's proposed **policy points** are:

- We are concerned that a perception that ORR is ready to arbitrate if routes are **unable to reach agreement with operators** on performance trajectories will undermine the process to develop scorecards.
- In setting the **CRMP floor**, we have concerns that the proposed margin of 20 per cent and a methodology based on a ten year historical average performance would expose us to undue risk.
- Where we demonstrate (and ORR accepts) that a measure is no longer fit for purpose and we propose to **remove the measure from our route comparison scorecard**, we do not think there should be a requirement to continue to report it.

We have the following concerns in relation to **specific measures**:

- **Network availability**: the extended journey time metric does not satisfy our assessment criteria for inclusion within the CP6 monitoring framework because it does not drive Network Rail decisions and we do not believe it is meaningful to our customers or end users.
- **Use of the network**: we do not believe that traffic should be reported against a baseline that is fixed for the control period as this will undermine the possible value of these measures. Instead, we propose the traffic forecast is updated annually in line with our broader scorecard process.
- **End user experience**: we do not think that the rate of change should be based on previous out-turn and should, instead, be made between results of the same season to provide a more meaningful comparison.
- **Third party investment**: we do not believe this area is mature enough to include on route scorecards at this stage and further testing of the value of the data is required before we consider this. We propose to report on our progress in this area through our quarterly scorecard report and Annual Return.

We welcome ORR's confirmation that our route and SO scorecards will form a key part of ORR's approach to regulation, in particular that they are balanced, support comparison between routes, and reflect the HLOSs where appropriate. This creates a CP6 regulatory framework that wraps around the way we run our business to meet the requirements of our stakeholders.

We want to make sure ORR will be able to use our scorecards throughout CP6, and have noted its reservations regarding the transparency and quality control of route consistent measures. We will publish definitions for consistent route measures and centrally assure the application of these. We will also continue to centrally assure route trajectories to provide a consistent level of challenge.

In CP6, ORR will focus primarily on route and SO scorecards to monitor and report delivery against plans. This is predicated on our routes and the SO being empowered to challenge and hold national functions to account. Network Rail is a matrix organisation made up of nine route businesses and national functions comprising group functions (including the SO) and route support services. Our matrix structure has been designed so that the national framework supports routes and enables them to operate as an integrated system that meets the needs of our customers and stakeholders fairly and transparently.

We continue to develop our governance and reporting framework for CP6. We will continue to engage with ORR to explain how our updated governance framework empowers routes/the SO to challenge and hold functions to account where this is appropriate. We comment further on the governance framework in our response to ORR's consultation on the proposal reform of our network licence.

Key scorecard trajectories

Our response to the Draft Determination includes updates of key scorecard trajectories following ORR's analysis of our Strategic Business Plan (SBP). A summary of our views on each of these three key areas is included below.

Passenger performance

Routes have engaged with customers to review trajectories for customer train performance measures to identify whether adjustments can be made and to reflect on further opportunities and risks which had not been sufficiently captured in the SBP. Revised interim customer performance trajectories were submitted to ORR on 13 July and, following further customer engagement, updated trajectories and the recalculated CRMP trajectories are included in our 31 August response.

As with the SBP, the level of engagement and agreement has varied across customers and routes. This has primarily been driven by continued misalignment between franchise performance obligations and what routes think is reasonably achievable.

In its Draft Determination, ORR states that if routes are unable to reach agreement for **customer performance trajectories** and there is clear evidence from a customer that performance could reasonably be higher than a route is willing to agree to, it will 'take a view' on performance in its Final Determination. We think that care needs to be taken in this area. ORR is unlikely to have better information to set different targets. It could also result in a perception that ORR is Network Rail's customer, undermining the process to develop scorecards and the commitment to engage. While we do not consider that ORR should arbitrate, we recognise that it will want to form views of customer performance trajectories in order to inform the level of regulatory monitoring. In forming its views, ORR will need to consider and analyse the full range of factors involved in developing a route plan alongside evidence supplied by customers. It is critical that evidence stands up to objective scrutiny and can be justified. Where evidence is supplied by customers, we believe that routes should have an opportunity to review and provide comment on this.

We understand that within its Final Determination ORR will publish CP6 baselines for **CRMP**. The CP6 baselines will form the basis for reporting at the start of CP6 and will inform the corresponding regulatory minimum floor for CP6 and Network Rail's Schedule 8 benchmarks. We propose that ORR uses our revised CRMP forecasts as the basis for setting Schedule 8 benchmarks and the CRMP thresholds to maintain route ownership based on deliverable targets. We are concerned that if ORR takes a view that the regulatory minimum floor should be different from those in our plans, this may create significant financial and reputational risk for routes.

Reflecting the challenges in reaching agreement to longer term trajectories, Network Rail believes that a reasonable outcome would be for the industry to come together to agree rolling one-year performance targets in CP6 for both customer performance trajectories and CRMP trajectories. This largely replicates the model that has been used to successfully develop and agree annual route scorecards in the latter part of CP5.

Within CP6, we believe ORR should monitor the effectiveness of engagement and the extent of agreement throughout CP6. Where routes and customers assess and agree performance targets, we expect that ORR will accept and report performance against these. If routes have not been able to reach agreement to performance targets and ORR's assessment is that scorecard targets **are** appropriately challenging, we would expect ORR to evaluate our performance against these, enhancing monitoring if actual performance falls short of scorecard trajectories. If ORR's assessment is that route plans **are not** sufficiently ambitious, it may enhance its monitoring earlier relative to our scorecard trajectories by scrutinising the delivery of train performance more carefully.

Freight performance

We welcome ORR's view that the route and national FDM trajectories within our SBP are reasonable and sufficiently stretching. The exercise to develop targeted adjustments to performance trajectories focused on passenger performance. When we update our Delivery Plan for publication in March 2019, we will review freight trajectories with customers in the context of updated performance trajectories.

Network sustainability

In its Draft Determination, ORR identified around £1 billion of expenditure that could be made available to improve the sustainability of the network. We provided an initial submission on 13 July 2018 outlining how this extra money would be spent and the associated potential effects, particularly with respect to sustainability. We have continued to develop our plans and have provided an alternative proposal as part of our response to the Draft Determination.

Regulatory minimum floors

ORR will set regulatory minimum floors for CRMP, FDM-R, national FDM and network sustainability in its Final Determination. ORR states that a regulatory minimum floor is the point at which it is 'highly likely to formally investigate Network Rail for breach of licence'. We agree that delivery below the floor would be likely to trigger an initial investigation, but that any investigation would focus on considering the circumstances behind the performance decline rather than immediately investigating a possible licence breach. A formal investigation into whether or not Network Rail has breached is licence would only follow issuance of a 'case to answer' letter.

While trajectories will be updated annually throughout CP6, the level of the floor is unlikely to change during CP6. However, we agree with ORR that there are certain circumstances when it would be sensible to review the level of the floor, for example following a performance investigation or following a change to Schedule 8 benchmarks.

ORR agreed with our proposed regulatory minimum floors for freight and network sustainability but expected Network Rail to calculate a regulatory minimum floor for CRMP at a consistent margin of 20 per cent below the CRMP trajectory and using an alternative methodology. We are continuing to discuss the CRMP minimum floor with ORR with discussions focussed on two key areas – the level of the margin and the methodology for calculating the threshold. We have concerns that the absolute level of the floor alongside ORR's proposed methodology would expose us to undue risk. We describe these concerns in our detailed response below.

Structure of our response

Our detailed response addresses the key policy areas and the findings of ORR's assessment of route and SO scorecards. It also responds to the additional requirements of ORR, outside scorecards, in CP6.

Detailed response

ORR's policy approach

Customer engagement and agreement of Network Rail's scorecards

Our route and SO scorecards are developed in conjunction with our customers. Like ORR, we see increased value in these if they are informed by, and where possible agreed with, customers.

While there is now better understanding between Network Rail and its customers on the challenges and opportunities to improve current levels of performance, engagement has not, in the vast majority of cases, resulted in agreement of long term performance trajectories. The lack of agreement in trajectories has been driven by continued misalignment between franchise performance obligations and what routes think is reasonably achievable (within the funding envelope available), commercial drivers and the absence of sufficient evidence to substantiate perceived opportunities to improve performance. These matters cannot be resolved solely between Network Rail and its customers. Given these constraints, and the difficulty of forecasting performance levels accurately, Network Rail believes that a reasonable outcome would be for the industry to come together to agree rolling one-year performance targets in CP6. This largely replicates the model used to develop annual route scorecards that has existed in the latter part of CP5. There are likely to be some operators that will not agree one-year targets given their franchise targets. We expect ORR would then consider whether Network Rail's forecasts are challenging enough, and if not, enhance monitoring at an earlier point relative to scorecard trajectories by scrutinising train performance more carefully.

To deliver a high-quality engagement process, ORR sets out the expectations it has of routes and the SO to engage in a timely manner, to work with other routes, to obtain agreement at the appropriate level of seniority and to keep a clear record of what has been agreed and when. Our stakeholder engagement framework for CP6 addresses these points. Further detail is included in our response to the Stakeholder Engagement supplementary document.

Change to Network Rail's scorecards in CP6

We will update our scorecards annually to reflect changes in circumstances and customer priorities. This will start with the publication of our Delivery Plan in March 2019. We will explain how our plan has changed, highlighting the engagement that has taken place and the level of agreement where appropriate. During CP6, we will explain changes to scorecard trajectories with reference to our previous plan. Our in-year and year-end reporting will reference the latest scorecard/plan.

We acknowledge that a change to any route consistent measure on the route comparison scorecard would constitute a level III change. Examples of this could include a change to the definition or calculation methodology, or a proposed substitution of a metric where the metric was shown to be no longer fit for purpose.

ORR proposes that if a measure is removed from the route comparison scorecard, it would continue to require that the measure is reported. We strongly believe that where it can be demonstrated that a measure is no longer fit for purpose and having followed the relevant process to manage a change, we should not be required to continue to report it. In CP5 we have continued to report PDI data despite our concerns that it was misleading, unreliable, and costly to produce. It is important we learn lessons from this experience and adopt a pragmatic approach for CP6 in this regard.

ORR's assessment of Network Rail's scorecards

Balance

We welcome ORR's view that our scorecards effectively balance the requirements of current and future stakeholders. ORR highlights a reservation in relation to the effective representation of national passenger operators by FNPO. FNPO will share its governance and reporting framework with stakeholders in September 2018 to demonstrate the interfaces to hold geographic routes, the SO and other parts of Network Rail to account for delivery of freight and national passenger operators' performance.

ORR also sets out an expectation that for scorecards to be fully balanced, CrossCountry should be represented on all route scorecards (except

South East). Anglia is continuing to engage with CrossCountry through the regular joint sessions on cross-route performance improvement led by the FNPO Route to determine the approach to monitoring performance. LNE&EM will include CrossCountry on its route scorecard and engagement to do so has already begun. Wessex route continues to work with FNPO colleagues to monitor performance for CrossCountry on the Wessex route scorecard.

Consistent route measures

It is important that our stakeholders have absolute clarity about what the scorecard measures are and how they are calculated so they can understand what scorecards are saying about route/SO performance. Stakeholders also need to be confident that consistent route measures are genuinely consistent across routes.

We recognise there were some shortcomings in our governance of the definitions of the consistent scorecard measures at the time we published our SBP. We are putting in place plans to improve transparency and our governance and assurance processes. We will publish a definitions document on our website annually which will be updated to reflect any changes to definitions.

So that routes apply definitions for scorecard measures in a consistent way, a master set of definitions, with clear accountabilities for each measure, will be maintained centrally and provided to routes. Our Business Review Team (BRT) will have accountability for reviewing and challenging the consistency of definitions across routes and the calculation methodology applied.

To make sure there is a consistent level of stretch within route trajectories, BRT will also oversee the assurance processes carried out by the individual teams within Network Rail. Routes are also strengthening their processes to develop and report scorecards.

Reflect the HLOSs

We are pleased that ORR agrees that our scorecards support the delivery of the requirements in the High Level Output Specifications (HLOSs). Alongside scorecard measures, our Executive Committee also monitors milestones and progress in workstreams developed to deliver improvements in key areas, consistent with the HLOSs. This allows us to monitor inputs to improvement programmes as well as assessing the benefits delivered via the metrics on our scorecards.

Some requirements set out in the Scotland HLOS are not necessarily suited to being captured on the route or customer scorecards. Scotland route has developed a tracker to support scorecards, by which Network Rail, ORR and Transport Scotland can review progress against the HLOS requirements at quarterly tri-lateral meetings. This tracker is owned by Scotland route and is included as an appendix to the Scotland response to the Draft Determination. We will continue to engage with ORR and Transport Scotland to provide greater clarity of the role each party (including other routes, the SO and FNPO) will play in delivering these plans. There will also be opportunities to discuss progress at regular forums with customers for relevant measures. Supporting the HLOS tracker, the SO has developed a tier 2 scorecard for Scotland reflecting its activities in support of the Scottish HLOS priorities.

The Draft Determination makes specific proposals in relation to train performance targets for Scotland route in order to reflect the HLOS requirements. Scotland route has responded to these specific points and provided more detail about its approach to meeting the HLOS requirements in its response to ORR's conclusions for Scotland.

Route and SO scorecards

The points arising from ORR's assessment of route and SO scorecards have been addressed through individual route/SO responses. This section addresses the specific framework points ORR makes in relation to the SO and FNPO within the supplementary Draft Determination document.

For the SO, ORR has highlighted the need for its scorecard structure to provide stakeholders with assurance that their priorities are being addressed. The SO has already implemented a two tier (network-wide tier 1 and directorate tier 2) scorecard framework in 2018/19. It will be setting out CP6 Year 1 scorecards for three tiers (as before, but incorporating routes as tier 3) in its CP6 Delivery Plan. Tier 3 scorecards will clearly set out routes' specific priorities to enable the SO to monitor its delivery against these objectives. While these scorecards may not be directly comparable owing to the differing priorities of the SO's customers geographically, they are likely to provide opportunities for structured continuous improvement and sharing of best practice.

The SO will continue to review and update its CP6 scorecards as required to reflect emerging stakeholder priorities and to reflect its planned outputs through consultation with its customers. By way of example, following the challenges surrounding implementation of the May 2018 timetable, the SO scorecard for 2018/19 includes a trajectory for the T-12 recovery plan.

The SO has taken steps to embed an external governance framework to enable stakeholders to influence priorities. This arrangement formally began with an inaugural meeting of the SO Advisory Board in July 2018 and the SO has committed to review arrangements with the industry throughout January and February 2019. Before the start of CP6 and at each subsequent update, the SO tier 1 scorecard will be reviewed by the SO Advisory Board. The SO will also publish an annual narrative report discussing performance and objectives in areas that are not necessarily suited to being included in scorecards.

In September 2018, FNPO will start the process to review and update scorecards for 2019/20. This process will incorporate lessons learnt from the previous scorecard update to improve engagement with stakeholders and seek agreement of the scorecard and metrics with stakeholders. FNPO has developed milestone plans to confirm trajectories that were previously 'TBC'. These milestone plans will be included in an updated iteration of the FNPO strategic plan which will be shared with stakeholders.

Passenger train performance

ORR has highlighted some specific questions relating to passenger train performance trajectories. A separate response submitted to ORR on 13 July set out our response to these questions, and we have provided a further update in individual route responses to the Draft Determination which also re-calculates the CRMP trajectories, where appropriate. We have also provided further documentation which summarises the latest position on train performance.

For the **regulatory minimum floor** for CRMP, ORR proposes a methodology based on using a historical average (we proposed a fixed reference point) and a reduced margin of 20 per cent (we proposed 30 per cent). We are concerned that ORR's proposals will result in an increased risk that the floor will be breached at levels of performance that are not the result of systemic failures.

In relation to ORR's **proposed methodology**, the drawback of using a historical average over CP4 and CP5 is that this assumes the structure of the railway and the performance challenge is unchanged over the last 10 years, which the industry acknowledges is not the case.

There has been significant variation between CP4 and CP5 performance levels. Where current performance for a route is worse (lower CRMP is better) than the historic average, the margin would be lower than for another route which is at historically good levels of performance. This would mean that a route with historically good levels of performance could worsen by a greater proportion before triggering the regulatory floor, compared to a route which is at historically poor levels. Our analysis shows that using this methodology would give some routes a margin as high as 24 per cent of their 2017/18 Period 10 performance while some routes would have a margin as low as 14 per cent. Network Rail and ORR have been working together to assess the proposed methodologies and test them against the actual delivery of performance in CP5 to indicate the potential regulatory impact of each approach in CP6. We continue to believe that calculating the floor using a historical average over CP4 and CP5 will introduce undue risk given the wide variation in performance over that period and that any breach of the floor may therefore not be reflective of a systemic failure.

In relation to the **size of the margin**, we do not believe that the floor should be set at a level whereby it would be breached by missing performance trajectories for one Train Operating Company (TOC) on a multi-TOC route. Instead, we believe that the floor should be set at a level where a breach is indicative of systemic failure which warrants further investigation. ORR proposes that applying a 30 per cent margin as the regulatory minimum floor would have resulted in no breaches in CP5. Using our proposed methodology, our analysis shows that both South East and Wessex routes would have breached the regulatory minimum floor if it had been set for CP5. This aligns with the areas where ORR has made further investigation into Network Rail's delivery of performance in CP5.

We are concerned that ORR's proposal for a 20 per cent margin is too susceptible to natural variation. For example, as most weather delay is attributed to Network Rail, the Moving Annual Average for CRMP for many routes at the start of CP6 will include delay caused by the recent extreme hot weather, meaning that some routes would start CP6 in breach of the floor. We therefore strongly recommend a 30 per cent margin because this is less susceptible to externalities. We will continue our discussions with ORR to agree the methodology and margin alongside the practical application of a regulatory floor within the Control Period.

In our SBP we set out our commitment to monitor and report on reactionary delay. We agree that this data should be made public and we propose to include this in our Annual Return. We are currently engaging with ORR to agree a reporting protocol for CP6 which will set out arrangements for regulatory reporting. We will also continue to share cancellations data with ORR.

We note ORR's intention to launch a Performance Innovation Fund of £10 million in CP6. We are unclear on what sort of activity this is intended to fund as ORR has provided us with very little further information since the publication of the Draft Determination. We are keen to discuss this further so we can better understand the value of this proposal. We note that ORR considers this fund will need specific governance. We need to make sure that the governance is appropriate to the scale of the fund.

Link from CRMP to Schedule 8 benchmarks

The CP6 baselines for CRMP that ORR will publish in the Final Determination will determine the regulatory minimum floors for CP6 and Network Rail's Schedule 8 benchmarks that are set out in track access contracts. We propose that ORR uses our revised CRMP forecasts as the basis for setting Schedule 8 benchmarks and the CRMP thresholds. This will maintain route ownership based on deliverable trajectories. It is important that Schedule 8 benchmarks are set at a level that is realistically achievable. Unrealistic benchmarks will result in significant additional costs for Network Rail.

As described above, while CRMP trajectories will be updated annually in CP6 through route scorecards, the regulatory minimum floor and Network Rail's Schedule 8 benchmarks will remain fixed, unless there is a fundamental change in circumstances. The performance planning for some routes has had to include a substantial degree of uncertainty related to major enhancements of the system, which is reflected in the performance trajectory.

We have worked with the industry to provide some suggestions to ORR as to what would constitute a fundamental change in circumstances and have suggested that these could result in a contractual reopener of the Schedule 8 benchmarks in CP6. We consider that, at a minimum, it will be appropriate to re-open the performance trajectories following the introduction of the Thameslink 24 trains an hour timetable, the opening of the 'Elizabeth Line' Crossrail services and the substantial changes in the Welsh franchise, when the actual performance impact of these changes can be better assessed. Recognising that there is considerable uncertainty in forecasting performance, we also propose that there should be a re-opener if our forecasts are materially/systematically understated.

To align the regulatory and financial incentives we believe that there should be a link between Network Rail's Schedule 8 benchmark and the level of the CRMP floor. Where a change is made to Schedule 8 benchmarks, following a contractual reopener, we believe this should automatically trigger a review of the relevant CRMP floor to avoid misalignment between the regulatory and contractual regimes. While we consider a change to the CRMP floor would not automatically trigger a change to the Schedule 8 benchmarks, it could be that the circumstances that led to a change in the floor would also justify a change in the Schedule 8 benchmark.

Freight performance

We welcome ORR's agreement that the national FDM trajectory in the SBP appropriately considered the main factors affecting forecast performance levels. It is important to recognise that FDM performance at the end of this control period will be lower than was previously forecast. As highlighted in the FNPO strategic plan, performance is likely to become progressively more challenging given the changes in freight traffic mix and geography. Notwithstanding this, we remain committed to a national FDM target of 94 per cent for CP6. We also welcome ORR's agreement to a regulatory floor of 92.5 per cent nationally, and at a level representing 30 per cent more delay than targeted for each geographic route, including Scotland.

We understand that ORR will be publishing baseline FDM-R trajectories in its Final Determination which, based on our SBP trajectories, will be representative of the national FDM target of 94 per cent. In the event that any FDM-R targets are not set at a level to meet the national FDM target, ORR has indicated that it will require Network Rail to adjust these so they deliver the national FDM. We will review alignment between FDM-R and national FDM trajectories through our annual scorecard update process, however we do not propose to automatically adjust FDM-R targets to meet the national target. If an increase or decrease in any FDM-R target is warranted, then we would consider the impact on the national FDM trajectory and, if necessary, follow our change management processes.

ORR states that it has some reservations about FNPO's analytical capability and modelling. As a new route, FNPO continues to work with industry to develop and provide meaningful analysis to monitor and understand performance. For example, the Draft Determination notes that FDM-R is a relatively new measure, the calculation of which has recently been adjusted to better meet freight operators' requirements. ORR has not previously made FNPO aware of any concerns about analysis and modelling. We would welcome further clarify from ORR on its specific concerns so that we can address these as appropriate.

Network capability

We agree with ORR's conclusion that Network Rail should protect and maintain baseline capability where appropriate and follow the recognised industry process if changes are required. We consider that a review of industry processes early in CP6 is needed. The process for Network Change set out in Part G of the Network Code was written at the point of privatisation. Given Network Rail's reclassification, we believe that it may no longer be the most effective process through which to manage changes to the network. The Network Code sets out arrangements to protect contractual rights but does not consider the impact of a network change on wider industry objectives and the local and national economy.

We propose that monitoring management of Network Capability in CP6 should be route based, consistent with route based regulation. We also propose that in assessing Network Capability, Network Rail and ORR should consider the net benefits across the system. Wider assessment of Network Capability should consider the interface between the network and vehicles on it, and the level of utilisation. Maintaining capability at a level that is not utilised is not necessarily the most efficient use of funding.

It is important to note that the CP6 settlement will only fund maintenance of Network Capability. If any enhancement is delivered via a separate funding arrangement, we suggest that the baseline is adjusted to incorporate this.

We are working closely with ORR and the Independent Reporter to develop appropriate metrics for CP6. As part of this work we think that it is important that all parties are clear as to how any assessment of capability will be made.

Network availability

Planning and taking possessions effectively and efficiently is important to us, our customers and end users. The Possession Disruption Index (PDI) has previously been used to monitor and report on the level of disruption caused to end users as a result of possessions taken by Network Rail. However, PDI is no longer fit for purpose and we welcome ORR's recognition of this. We believe that moving away from reporting PDI presents an opportunity to develop a new approach to monitoring Network Rail's delivery of Network Availability in CP6.

We welcome ORR's recognition that Schedule 4 and the requirements of the Network Code largely provide appropriate incentives for Network Rail to plan and take possessions effectively and efficiently. However, we acknowledge that it is difficult for ORR to use Schedule 4 data to publicly monitor and report on this area due to the confidential nature of the data at a granular level.

We have therefore been working closely with ORR to develop a suitable monitoring framework for Network Availability in CP6. There are three key areas of work that have informed our discussions:

1. the customer survey that ORR carried out in 2017 that sought views on how effectively Network Rail demonstrated its commitment to maximise the availability of the network and to minimise disruption during possession. The survey resulted in constructive feedback that we felt was more informative than that derived from a single measure

2. the SNC-Lavalin report that was commissioned by ORR which recommended an extended journey time (EJT) measure as part of a suite of measures to monitor network availability
3. Network Rail's review of the existing suite of measures we report in our Possession Indicator Report alongside the additional proposals set out within SNC-Lavalin's report.

ORR's 2017 customer survey provided a useful level of information that pinpointed areas of best practice and areas for improvement. We believe there is considerable merit in the continuation of a customer survey and that this is something that could be conducted on an annual basis in CP6.

In considering an approach that involves monitoring specific measures, we are keen to avoid replacing PDI measures with measures that suffer from the same shortcomings. We have therefore reviewed the suite of measures that we currently report, alongside those included in SNC-Lavalin's report, to evaluate each measure against a series of criteria. These criteria include whether it would drive Network Rail decisions, whether it reflects the impact on passengers and/or customers, the simplicity of production, the level of industry support, the cost of production, and whether it is easy to interpret.

The key measure proposed in SNC-Lavalin's review is EJT. We do not believe this meets the criteria above in most areas. It is not a measure of Network Availability, it would not drive decisions, there is no evidence that there is any industry support for the measure, and we are not convinced that this measure is intuitive or informative for customers or end users. In addition, there would be cost implications to create and maintain a service group weighted metric.

Our evaluation has resulted in two key areas that we think are sensible to continue to monitor and report and could therefore be used by ORR:

- Late Notice Possession Changes captures Network Rail driven changes that have an additional material impact that will be felt by the travelling public and freight customers (and we are now actively tracking as part of our informed traveller recovery plan)
- The level of access disputes escalated to the Access Disputes Committee which is a measure of the impact on customers. We measure this through the EAP process using two leading indicators – Confirmed Period Possession Plan disputes and Engineering Access Statement disputes. These assess the effectiveness of the access planning processes.

The results of ORR's customer survey in late 2017 provided evidence of customer support for these measures.

We propose that a combination of qualitative and quantitative approaches is taken to monitor whether Network Rail is managing its possessions for engineering access effectively. This could be based on an annual customer survey in combination with monitoring the core measures we use to inform decisions. We will continue to work closely with ORR to agree the most effective approach to monitoring Network Availability in CP6.

Network Sustainability

We agree with ORR's conclusion that asset sustainability should be monitored across a broad range of performance indicators (including inputs and outcomes). Part of our monitoring activity is to assure that the sustainability of the infrastructure is optimised. We will produce an annual, route-based engineers' report for each asset type. Route asset engineers will continue to meet with ORR to update on progress against plans. We will also provide ORR with required information to justify any change to the baseline for Network Sustainability, such that regulatory monitoring can be aligned to the information we are using to drive decision making within Network Rail. It is important to note that delivery of the work plan and the associated Network Sustainability outcomes is the accountability of routes rather than STE, so routes will be accountable for providing information to ORR that is required for monitoring.

In monitoring the outcomes for Network Sustainability, ORR notes that it sees the merits in the development of an alternative, improved measure of network sustainability. We will provide ORR with a plan for this by the end of September 2018.

We welcome ORR's agreement to our updated regulatory floor proposals supplied in May 2018.

Other measures

Passenger satisfaction

We agree to report the passenger satisfaction results from the twice-yearly

National Rail Passenger Survey in our route comparison scorecard. We will report the absolute value for each route as well as the rate of change to inform direct route comparison. We do not agree that the rate of change should be reported against the previous issue of the NRPS results which would compare autumn to spring or vice versa. The published NRPS highlights that as some station and train factors have a seasonal component to the results, the main comparison used is against the survey one year previously. We suggest that ORR's comparisons are also made between results of the same season (i.e. comparing autumn to autumn and spring to spring) as this will provide a more meaningful comparison, highlighting areas of genuine improvement or decline rather than the impact of seasonal variations.

When reporting Passenger Satisfaction with Managed Stations, we suggest that there may be value in weighting the route average by station footfall. This will present a more accurate assessment of the number of station users on the route. We already use these weighted averages to inform our decision making.

Use of the network

We continue to believe that the usefulness of these metrics as a comparison of route performance is extremely limited. We are concerned that there is a risk, therefore, that they are unlikely to fulfil ORR's desire to encourage competition between routes to make 'maximum' use of the network. However, we understand that for ORR to consider our scorecards to be balanced, a measure of traffic is required in CP6. We will therefore include the passenger and freight measures of traffic in our route comparison scorecard and will report actual traffic data quarterly.

The Draft Determination proposes that we report actual traffic data against a baseline that is set for the control period. We are concerned that reporting against a baseline that is fixed several years previously will undermine the possible value of these measures, fail to incentivise routes, and create a situation where the narrative to explain traffic is focused on an explanation of why the forecasts are no longer relevant.

Traffic forecasts are dependent on many factors including rolling stock delivery, infrastructure delivery, franchise changes, and wider macroeconomic issues that are unknown at the point of forecast. Our business plans are based on an annually updated traffic forecast so that maintenance and renewals forecasts and income submissions take account of the latest information.

We therefore consider it more meaningful to report quarterly actual traffic against an updated annual forecast. We update our traffic forecasts between May and August every year for the following financial year and we suggest that actual traffic data is reported on a cumulative basis every quarter against the annual traffic forecast that has been revised the previous August. For the first year of CP6, we would therefore use the August 2018 forecast, which is an update to the SBP traffic forecast that is now out of date. This proposal aligns to the annual process to update scorecards as part of the business planning process and creates a reporting framework where the narrative is focused on reviewing the in-year performance of routes against updated forecasts.

Third party investment

We have established dedicated teams to focus on the considerable private sector appetite to invest in the railway. Given this focus, we track and report how successfully we are delivering. This helps us understand what is working and what can be improved.

We agree that a measure of third party investment would not be appropriate to include on the route comparison scorecard given the variation between routes in the potential value of third party investment.

We also do not believe that a measure of third party investment is currently suitable for inclusion on route scorecards. The development of third party investment opportunities is at an early stage of maturity meaning that we have not thoroughly tested the metrics we are using to report progress to assess whether they constructively reflect performance in this area. We are also concerned that increasing the number of measures will reduce the effectiveness of scorecards. In addition, scorecards are used to monitor performance against targets with a periodic drumbeat. Efforts to bring in third party investment operate over longer timeframes meaning that periodic reporting does not provide the same value it would do for other areas, e.g. train performance. Instead we propose to include a section on third party investment in each route within our quarterly scorecard report and the Annual Return. This will provide transparency and enable routes to be held to account for progress in raising third party investment.

Network Rail's response to ORR's Draft Determination: Stakeholder Engagement

31 August 2018

Executive Summary

- We commit to improving and reporting upon stakeholder engagement in CP6 and consider it important that **ORR wraps its approach to assessment** of engagement around our stakeholder engagement framework.
- We believe **the changes we are making to Supervisory Boards will allow ORR to take these into account** when monitoring routes' performance**.**
- We are keen that routes and the SO have the ability to innovate and therefore **we are concerned that proposals to reform our licence obligations** on stakeholder engagement should not be overly prescriptive.

Stakeholder engagement is a fundamental part of how we seek to continuously improve our business performance. We want to be able to focus more precisely on, and drive our business by, the needs of our stakeholders. Our definition of stakeholder includes any organisation with which we have a business relationship and which can be impacted by the activities of Network Rail.

The development of our Strategic Business Plan (SBP) involved a step change in stakeholder engagement compared to PR13 with a broader range of stakeholders being consulted earlier in the business planning process, capturing requirements to drive the shape and content of our business plan. We welcome ORR's acknowledgement of this step change. We are pleased that ORR recognises the importance we are placing on stakeholder engagement. We also understand that there is more to do to develop the maturity of our stakeholder engagement processes and that we are at an early stage in this process.

We welcome the findings of ORR's assessment of our stakeholder engagement to develop the SBP. These highlighted many of the points of learning and best practice that arose from our own reviews. In response to the findings of the various assessments, we are developing a stakeholder engagement framework for CP6 that seeks to:

- create a shared understanding between routes/the SO and stakeholders of the expectations of engagement
- transparently report the outcomes of engagement and how our plans are driven by these
- review the quality of engagement on a regular basis to continue to drive improvement.

To achieve these aims, we are examining the possibility of publishing an annual stakeholder engagement report for each route and the SO. We expect the annual reports to review and assess the engagement that took place over the previous year. We also anticipate the reports will include plans for stakeholder engagement over the next year that will provide a transparent statement of when and with whom we will engage, the purpose of engagement, and the expected outcomes.

We understand that ORR will assess the quality of route/SO stakeholder engagement to inform its approach to monitoring in CP6. ORR is yet to develop its assessment approach, but we think that ORR's approach should wrap around our engagement framework. We advocate a risk-based approach to ORR's assessment, which is based on the results of our assessment and feedback received by ORR from our stakeholders.

A key forum where routes will continue to work closely with stakeholders in CP6 will be the Railway Boards (which were previously called Supervisory Boards) which bring track and train closer together. We welcome ORR's continued support for Railway Boards. We have reviewed the effectiveness of the Boards that are currently operating. We have also considered what ORR needs from Railway Boards for it to be able to take them into account when monitoring routes' performance, as well as requirements from DfT. This has resulted in a number of changes to the remits of Railway Boards to strengthen their accountability. This includes a role to involve stakeholders in the annual business planning process, to agree and deliver route scorecards and to hold the routes to account. We consider that these changes will allow ORR to take Railway Boards into account when monitoring routes' performance in CP6.

We also intend to set up a FNPO Railway Board and are discussing this with customers. The inaugural meeting of the SO Advisory Board took place in July 2018.

Our detailed response addresses the findings of ORR's stakeholder engagement assessment. It also looks forward, describing our proposed stakeholder engagement framework for CP6 and the changes we are making to Railway Boards. Any specific comments in relation to the findings of ORR's assessment are included in route/SO responses.

Detailed response

ORR's findings

We assessed the stakeholder engagement led by routes and national functions to develop the SBP in January 2018. This assessment highlighted areas of best practice and areas where we could do better. Our findings were shared with routes, national functions and with ORR. ORR subsequently conducted its own assessment of our engagement to develop the SBP. We welcome ORR's findings, many of which mirror the key points from our own assessment which provides assurance that we have a shared vision of what good stakeholder engagement looks like.

Strengths of engagement

ORR highlights several strengths of route and SO stakeholder engagement to develop the SBP. In preparation for the SBP, routes and the SO identified their broad range of stakeholders and devised a plan of engagement that sought to address the differing needs of this diverse group. We welcome ORR's recognition of the step-change in breadth and depth of the engagement that routes and the SO undertook to develop the SBP. We also recognise and agree that our stakeholder engagement processes need to continue to improve.

Areas for improvement

ORR identifies a number of areas for improvement. While we recognise most of the points raised, we do not believe that earlier engagement or sharing draft scorecards would have led to greater agreement of performance trajectories. The key factor in driving a failure to agree trajectories is the misalignment between franchise obligations and what Network Rail thinks it can reasonably deliver. This is a fundamental issue that requires a comprehensive industry approach to the franchising process, and will not be resolved by earlier engagement or by sharing draft scorecards. In many cases routes shared draft scorecards with customers, and while we do not believe this improved the chances of agreement, it did provide an opportunity to get meaningful feedback on the measures proposed, and in some cases it led to further measures being included in scorecards.

To give stakeholders greater confidence that they can influence our plans, we are planning to address the following areas for improvement within our CP6 stakeholder engagement framework and updated guidance to routes and national functions:

- creation of a transparent plan of engagement which we believe will create a shared understanding of the expectations of engagement
- greater use of draft plans and scorecards to allow more opportunity to incorporate meaningful feedback
- clearer line of sight from stakeholder requirements to our plans and greater transparency over the prioritisation of requirements.

Contrasting approaches to engagement

Devolution and the different methods used by routes have enabled us to test a range of approaches and to review why certain approaches may work better than others. ORR highlights several areas where routes/SO took differing approaches to engagement, describing where things worked well and where it may be useful to consider different approaches. We welcome these observations and are planning to include the following points in our guidance to routes and national functions:

- we expect routes to continue to develop engagement with suppliers, working closely with IP
- we expect geographic routes to continue to develop engagement with freight end users through working closely FNPO
- we expect routes and the SO to provide stakeholders with information in a timely way to enable successful participation
- we expect routes and the SO to clarify the process that stakeholders can use to challenge decisions and to clarify how routes and the SO will respond to a challenge
- we expect routes and the SO to be able to demonstrate their understanding of passenger priorities and the requirements of lineside neighbours and we are considering how we can improve our use of research to create opportunities for this research to be more widely used by routes and the SO.

Stakeholder engagement in CP6

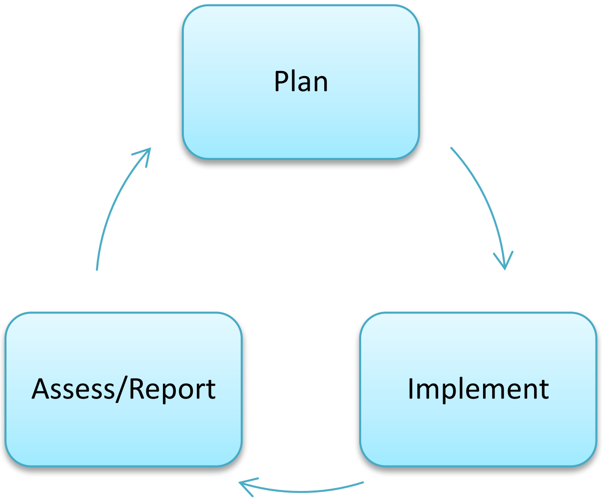
The Engagement Framework

We are taking steps to improve our stakeholder engagement framework to create a shared understanding between Network Rail and its stakeholders of the expectations of engagement.

As one company, we believe that there needs to be a single code of practice which forms the basis of our engagement framework in which we set out high level principles about how we will treat our stakeholders. Our Stakeholder Relations Code of Practice (SRCoP) will establish how we will treat our stakeholders in a reasonable way and we want to make adherence to its principles a core part of how we engage. Following consultation with stakeholders this summer on a set of overarching principles of engagement, we will publish an updated SRCoP once the output of ORR's consultation on reform of the network licence is known. The purpose of these principles is to clarify our commitment to engagement, create a shared understanding of the expectations of engagement and provide a basis from which we can assure the quality of our engagement. Established models of engagement in other industries, such as the energy sector, have been considered when developing these principles and they codify many of the areas highlighted by ORR's and our own assessment.

Mindful of the broader aims of devolution, we do not believe we should be prescriptive about how the principles are applied. It is more important that those who manage stakeholder relationships at the appropriate local, regional or national level determine how best to apply such principles, in order to treat stakeholders in ways appropriate to their needs. We are therefore developing a consistent framework that is based on the stakeholder engagement process. This will allow for routes and the SO to develop their own methods and innovative approaches to engagement.

The stakeholder engagement process can be summarised as three key stages: Plan; Implement; and Assess/Report.



Plan

One of the principles in our SRCoP is that we will be transparent in our dealings with stakeholders, providing clarity around expectations for future engagement. We will expect routes and the SO to identify who the relevant stakeholders are and how and why they may want to engage. Routes and the SO already have a good understanding of who their stakeholders are and we expect them to continue to review this throughout CP6, particularly where engagement needs to be developed with specific stakeholder groups.

It is important to determine the scope of engagement most appropriate to the stakeholder and the level and method that best suits their needs, recognising that this may change over time. We expect routes and the SO to consider a range of bilateral and multilateral engagement methods which are chosen on the basis of their suitability to each stakeholder.

With this information, we expect routes and the SO to develop a plan of engagement that sets out when we propose to engage, with whom, what the purpose of the engagement is, and the expected outcomes. The engagement plan should be shared with stakeholders to provide input and we would expect this to evolve over time to reflect any lessons learned.

Implement

Routes and the SO will continue to engage with stakeholders as part of the day to day running of their businesses to resolve operational issues and on a strategic basis to inform and shape our business plans. We have the following expectations of routes and the SO with regards to stakeholder engagement:

- stakeholders should be invited to participate within reasonable timescales ahead of planned engagement
- briefing materials should be circulated such that stakeholders feel able to participate where appropriate
- stakeholders should be informed about the process to challenge decisions taken and to escalate any issues
- engagement and its outputs should be recorded
- the outputs of engagement should be analysed to review the requirements, opportunities and risks in order to develop a plan
- the requirements of stakeholders should be described, with a clear explanation of how these have been prioritised. Where a requirement cannot be addressed in the plan, the reasons for this should be clear
- stakeholders should be informed of how their requirements have impacted the plan and what has changed as a consequence of engagement.

Assess/Report

It is important that we monitor and evaluate the quality of our engagement to drive continuous improvement. As mentioned above, our assessment of our engagement to develop the SBP produced many points of learning that we will seek to address in CP6. In CP6 we expect to put in place a more mature assessment process that will comprise two stages. For the first stage, we will expect routes and the SO to conduct a self-assessment of their quality of engagement against a consistent set of criteria. The criteria will reflect key stages of the engagement process, highlighted in the 'Plan', 'Implement' and 'Review' stages above and the assessment process will be based on a range of evidence that could include a stakeholder database or record of engagement, a correspondence log, meeting minutes and agendas, or stakeholder surveys. We are also looking into the prospect of including a consistent question within the stakeholder surveys that routes and the SO carry out that could form part of the evidence basis for self-assessment.

The results of routes'/SO's self-assessment will be tested and assured by a central assurance team to make sure there is a consistent approach to assessment across routes and the SO and that it is realistic to compare results. In assessing the quality of stakeholder engagement activities and its effectiveness, the central assurance team will need to be satisfied that the evidence presented is robust and reliable. The central assurance team will also have a role to highlight areas of best practice for the benefit of all routes and the SO.

Annual stakeholder engagement report

We are currently exploring the possibility that each route and the SO publish an annual stakeholder engagement report to transparently report on the key steps of the engagement process. We want to create a meaningful report that builds on our existing reporting framework and the timescales of our business planning process. This will enable clear links to be drawn from the outcomes of engagement to the objectives of the plan.

We anticipate that the published report would review the quality of stakeholder engagement, reflecting on how effectively the plan of engagement was implemented, what the outcomes of engagement were and how these have shaped our plans. We believe that the stakeholder engagement report would include route/SO self-assessment of stakeholder engagement, which will have been assured centrally. It would also look forward and review whether any changes should be made to how engagement is carried out in the future.

ORR has stated that it will assess the quality of stakeholder engagement in CP6. We believe the framework we are developing provides a good foundation for ORR to wrap its processes around. We are continuing to work closely with ORR as our plans develop.

Railway Boards

In 2017, we introduced Supervisory Boards (now called Railways Boards) to provide strong local oversight of industry operational performance and oversee performance improvements on the routes by bringing together the Route Managing Director and lead Train Operating Company Managing Director(s) to deliver operational performance and future route strategies. The voice of the passenger is also represented in these Boards through professional representation drawn from Transport Focus. The Boards (or similar structures) are being rolled out across all routes and will be in place by September 2018.

We welcome ORR's view that Railway Boards are a valuable forum to encourage closer working between routes, the SO and their customers. At the same time as rolling out the Railway Boards, we have also reviewed their effectiveness. Some Boards are operating more effectively than others and we have sought to learn from these Boards to make changes that will enhance the effectiveness of other Boards.

Our review has led to changes being agreed by the chairs of the existing Railway Boards and Network Rail's Board to strengthen the effectiveness and accountability of the Railway Boards.

In addition, ORR highlighted in its Draft Determination that in order for it to rely upon a forum where a route engages with its stakeholders within the regulatory framework it would need to fulfil certain minimum requirements. These include that performance is discussed and challenged where appropriate, the causes of under-performance are identified, action plans to remedy issues are agreed, appropriate information is provided and routes and the SO are held to account effectively.

The changes we propose to make to Railway Boards such that they address both the findings of our review and the requirements of ORR are that they:

- should hold the route(s) to account by way of escalating concerns within Network Rail, Owning Groups and/or to ORR. The independent chair should also provide their opinion on the route's performance and strategic, medium-term objectives and strategy
- will be used as a key (but not the sole) mechanism to involve stakeholders in the annual business planning process, including by providing stakeholders with detail about what they are seeking to achieve and what they will deliver for these stakeholders
- will be a mechanism for the development and agreement of the route scorecards (as part of the annual business planning process), including the measures that should be included and the appropriate targets for delivery
- will apply principles of good stakeholder engagement aligned to those described in our SRCoP
- will ensure there is scope for bilateral and multilateral engagement, building on existing relationships, forums and joint strategies that provide a means for Network Rail and operators to work together to establish improvements for the railway
- chair will discuss and challenge performance relative to route scorecards and the expectations set out in the Final Determination, particularly how they relate to customer measures and trajectories
- will identify causes of any under-performance relative to targets and recognition of factors supporting out-performance
- will agree practical action plans to remedy issues, which could include actions on both the route/SO customers and which would then have delivery against these actions monitored and reported
- will provide an appropriate level of information in the public domain through a key messages report with actions following each meeting
- will publish an annual plan for passengers which will be passenger focused explaining what they can expect from 'us' as the railway
- chairs should report to the Chair, Network Rail providing a direct line to Network Rail's Board
- should have membership from DfT via the franchise team, enabling franchise targets to be reviewed in alignment with Network Rail scorecard trajectories.

We believe that these changes will enable ORR to rely on the Boards within their regulatory framework and DfT in their assurance processes. We will continue to work closely with both ORR and DfT to agree how the outcomes of the Boards will link to ORR's and DfT's processes.

We also intend to set up a FNPO Railway Board. We are currently discussing this with our customers to agree how we manage the meeting, recognising their different business needs.

In addition to these changes, we propose to bring the Railway Board community together along with industry bodies through the creation of an Industry Railway Board. This will create a ‘one railway’ Board with a shared purpose that advocates a common direction for rail in the UK. It will focus on industry-wide learnings and issues in the context of the need for improved service to rail users and value for money to the taxpayer. It will discuss the future strategic direction of rail in the UK, bringing together all key members into one forum. The Board will also make recommendations for improvement in train and wider business performance to achieve better outcomes for the industry as a whole.

The Industry Railway Board will not duplicate or override other governance structures that exist within the rail industry. It will, however, provide a forum to share experiences and create a common direction for rail business performance in the UK and provides stronger collaboration between all parties who have a vested interest in improving the performance of rail in the UK for the benefit of passengers and end users of the rail network. The Industry Railway Board will meet formally on a quarterly basis commencing in September 2018. In addition, a meeting may be convened by any of its members if they consider it necessary.

SO Advisory Board

The SO is in the process of implementing the governance framework described within its strategic plan. The inaugural meeting of the SO Advisory Board took place in July 2018 following a transparent nomination and election process. We anticipate this framework playing a key part in the SO’s stakeholder engagement plans in the future.

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Network Rail’s response to ORR’s Draft Determination: Variable Usage Charge consultation

31 August 2018

Contents

Executive Summary

Key Concerns

Our key area of concern in relation to this consultation is ORR's proposed approach to indexing variable track access charges in CP6. We do not support:

- **Taking rates calculated in 2017/18 prices and then simply indexing them by CPI during CP6**. We consider that this approach would make variable charges less cost reflective because our maintenance and renewal costs increase by more than CPI each year.

- **Uplifting charging rates from 2017/18 prices to 2019/20 prices (the Initial Indexation Factor) using CPI**. Our view is that we should use RPI for this uplift (and at the very least for the uplift from 2017/18 to 2018/19 prices) because it should reflect that RPI was used as the measure of inflation in CP5.

Network Rail supports a broadly stable infrastructure charging position for freight in CP6. We recognise that this helps support existing traffic and growth, which is important to freight and core to the CP6 Strategic Business Plan. Ultimately, it is not just about the level of charges, but the overall financial / funding proposition for freight. Network Rail also supports the principle of cost reflective charges, though recognise that capping / phasing may be appropriate. **However, any changes to ORR's proposed caps/phasing would mean reductions in other Network Rail activities and programmes for CP6 recognised in the ORR's Draft Determination, given the fixed funding in the SoFA**. Overall, Network Rail considers that ORR's proposals in this area are reasonable.

In its Draft Determination ORR consults on the following key minded-to decisions in relation to the Variable Usage Charge (VUC) in Control Period 6 (CP6):

- Capping the level of VUCs charges paid by freight and charter train operators;

- Not capping the level of VUCs paid by franchised passenger and open access passenger train operators;

- Being minded-to support the small changes to the VUC that, following consultation, we set out in our May 2018 charging conclusions document; and

- Indexing variable charges, including VUCs, by CPI instead of RPI.

Our response to these key issues is summarised, below, and set out in more detail in the remainder of this document.

Charging caps for freight and charter operators

Network Rail supports a broadly stable infrastructure charging position for freight in CP6. We recognise that this helps support existing traffic and growth, which is important to freight and core to the CP6 Strategic Business Plan. Ultimately, it is not just about the level of charges, but the overall financial / funding proposition for freight. Network Rail also supports the principle of cost reflective charges, though recognise that capping / phasing may be appropriate. However, any changes to ORR's proposed caps/phasing would mean reductions in other Network Rail activities and programmes for CP6 recognised in the ORR's Draft Determination, given the fixed funding in the SoFA. The reason for this is that freight and charter trains cause the same 'wear and tear' on the network (which the VUC is designed to recover) even if ORR chooses to cap these operators' charges. Therefore, if ORR caps operators' charges at a lower level than set out in its Draft Determination, we would require additional money from funders to make up this shortfall. However, because the money that funders are making available for CP6 is fixed, this would mean reducing Network Rail activities elsewhere to make up this difference. Overall, Network Rail considers that ORR's proposals in this area are reasonable.

We formed our view in this area after carefully considering the impact of ORR's decisions in relation to the level of charges and incentives for CP6 in the round. We consider that it is important that changes to charges and incentives for CP6 are viewed as an overall 'package' and that decisions in relation to individual charges are not viewed in isolation. For example, we note that although VUCs payable by freight operators are forecast to increase over CP6, ORR has decided to remove the Capacity Charge and the Coal Spillage Charge. We also estimate that, following ORR's recent decisions in relation to the freight Schedule 8 regime for CP6, freight operators will receive additional compensation of c. £5m per annum, relative to CP5.

On 31 July 2018 we published a draft CP6 VUC price list, consistent with the policy set out in ORR's Draft Determination in relation to capping the level of VUCs paid by freight and charter train operators. We also published a note alongside the draft VUC price list, setting out our key assumptions and forecast CP6 VUC income (available on our website here).

Charges for passenger operators

We support ORR's proposal not to cap the VUCs paid by franchised passenger and open access operators in CP6. Franchised operators are held harmless to changes in the level of VUCs under the terms of their franchise contracts. We also agree with ORR that open access operators will also not experience a material change in the overall level of the variable charges that they will pay in CP6, due to the removal of the Capacity Charge.

Network Rail's May 2018 charging conclusions

We welcome the fact that ORR is minded-to support the small changes to the VUC that, following consultation, we set out in our May 2018 charging conclusions document. We consider that these changes will improve the cost reflectivity of VUCs in CP6.

We wrote to ORR on 28 August 2018 asking it to approve the recalibration of track access charges that we have carried out for CP6 (letter available on our website here).

Indexation of track access charges

Generally, we welcome ORR's statement that its decision to move from RPI to CPI is a 'technical change' that should have a limited impact on Network Rail (i.e. it should not affect the funding that we receive in CP6 in cash prices). ORR should ensure that it has identified all areas of the settlement that this change affects so that there are no unexpected consequences.

However, we do not support ORR's proposal to take rates for variable charges, calculated in 2017/18 prices, and index them by CPI for CP6. We consider that this approach would make variable charges less cost reflective because our maintenance and renewal costs increase by more than CPI each year. This means that if traffic levels turned out to be higher than forecast in CP6, the additional income that we would receive through variable charges would not cover our incremental 'wear and tear costs.

We consider that a more appropriate and cost reflective approach to indexing variable charges in CP6 would be to:

1. Forecast in cash prices (i.e. uplifting for RPI each year) the amount of money that we expect to receive through variable charges in CP6. This would also reflect our forecast 'wear and tear' costs.

2. Calibrate rates for variable charges in 2017/18 prices so that we receive the same amount of money in cash terms as described in point one, above, assuming charges are uplifted annually for CPI.

The effect of this approach would be that charging rates in year one of CP6 would start off higher than ORR proposes in its consultation. However, over the control period we would not receive any more income, in cash prices, than if our charges were indexed using the CP5 approach (i.e. indexed by RPI).

We also do not agree with the approach set out in ORR's consultation on the contractual implementation of PR18 which proposes uplifting charging rates from 2017/18 prices to 2019/20 prices (the Initial Indexation Factor) using CPI. Our view is that we should use RPI for this uplift (and at the very least for the uplift from 2017/18 to 2018/19 prices) because it should reflect that RPI was used as the measure of inflation in CP5. The way the contract is currently drafting essentially assumes that CPI applied in CP5.

Our concern that if the Initial Indexation Factor remains as is written in the draft contracts, then we will end up receiving less funding in CP6 if ORR does not reflect this lower level of income in our wider settlement.

Detailed response

Freight and charter operator charging caps

ORR view

ORR states that it will cap the increase in VUCs for freight and charter operators, who it forecasts will incur material increases in their (uncapped) total variable charges in CP6. ORR propose capping the increase in charges for these operator groups as follows:

- In years 1 and 2 of CP6, total variable charges will be held constant in real terms (i.e. equal to the final year of CP5). This will mean that VUCs in year one of CP6 will increase to offset the fall in other variable charges, primarily the Capacity Charge and Coal Spillage Charge which ORR has removed for CP6.

- In the following three years of CP6, the VUC will be based on a straight-line transition to full cost reflectivity by the end of CP7 (i.e. reaching the current estimates of the uncapped charges level).

ORR states that North Yorkshire Moors Railway's services and West Coast Railway Company's Jacobite services (which are heritage train operators but, unlike charter operators, have fixed access rights in common with open access operators) will be subject to the charter capping decision and charter VUC transition profile.

Network Rail response – Freight

Network Rail supports a broadly stable infrastructure charging position for freight in CP6. We recognise that this helps support existing traffic and growth, which is important to freight and core to the CP6 Strategic Business Plan. Ultimately, it is not just about the level of charges, but the overall financial / funding proposition for freight. Network Rail also supports the principle of cost reflective charges, though recognise that capping / phasing may be appropriate. However, any changes to ORR's proposed caps/phasing would mean reductions in other Network Rail activities and programmes for CP6 recognised in the ORR's Draft Determination, given the fixed funding in the SoFA. The reason for this is that freight and charter trains cause the same 'wear and tear' on the network (which the VUC is designed to recover) even if ORR chooses to cap these operators' charges. Therefore, if ORR caps operators' charges at a lower level than set out in its Draft Determination, we would require additional money from funders to make up this shortfall. However, because the money that funders are making available for CP6 is fixed, this would mean reducing Network Rail activities elsewhere to make up this difference. Overall, Network Rail considers that ORR's proposals in this area are reasonable.

We formed our view in this area after carefully considering the impact of ORR's decisions in relation to the level of charges and incentives for CP6 in the round. We consider that it is important that changes to charges and incentives for CP6 are viewed as an overall 'package' and that decisions in relation to individual charges are not viewed in isolation. For example, we note that although VUCs payable by freight operators are forecast to increase over CP6, ORR has decided to remove the Capacity Charge and the Coal Spillage Charge. We also estimate that, following ORR's recent decisions in relation to the freight Schedule 8 regime for CP6, freight operators will receive additional compensation of c. £5m per annum, relative to CP5.

Therefore, following careful consideration of changes to the freight and charter operator charging regimes in the round, we support the following ORR proposals:

- Increasing the level of VUCs in the first two years of CP6 to offset the reduction in other variable charges, mainly the removal of the Capacity Charge; and

- Phasing-in the remaining increase in the level of VUCs gradually until the end of Control Period 7 (CP7).

We consider that ORR's capping proposals strike a reasonable balance between maintaining a stable 'package' of charges for freight and charter operators, whilst continuing to move towards operators paying cost reflective VUCs.

Network Rail response – Charter

After considering the proposed changes to charter operators' charges in the round, we support ORR's proposed approach to capping charter VUCs in CP6. Consistent with our view in relation to capping freight charges, we consider that ORR's proposal strikes an appropriate balancing between maintaining a stable charging structure, whilst continuing to move towards charter operators paying cost reflective VUCs.

Network Rail and the charter industry are working together to address the issue of uncontrolled effluent discharge onto the rail network. We consider that ORR's decision to limit the increase in charter operator VUCs could assist the industry by freeing up resources to tackle this issue.

Network Rail response – NYMR and Jacobite

We support ORR's decision to cap the increase in VUCs for North Yorkshire Moors Railway's services and West Coast Railway Company's Jacobite services. Although these operators have fixed access rights like open access operators, they are analogous to charter services (i.e. heritage train operators) and, therefore, we support treating them in the same way as charter operators.

Network Rail's May 2018 conclusions on VUCs in CP6

ORR view

In May 2018 we concluded that it was appropriate to make some improvements to the methodology for calculating VUCs in CP6. For example, giving passenger operators the option of setting VUC rates based on the maximum line speed over the route on which they operate (instead of the maximum speed that the vehicle is capable of).

ORR has stated that it was minded-to agree with our conclusions in this area, however, that it is still considering several issues and will outline its position on these in its Final Determination.

Network Rail response

We welcome the fact that ORR is minded-to support our May 2018 conclusions in relation to the VUC. We consider that these will serve to improve the accuracy of VUCs in CP6.

We wrote to ORR on 28 August 2018 asking it to approve the recalibration of track access charges that we have carried out for CP6 (letter available on our website here).

Indexation of charges in CP6

ORR view

ORR sets out its view that in CP6 it will move from RPI to CPI for the inflation indexation of track access charges.

Network Rail response

Generally, we welcome ORR's statement that its decision to move from RPI to CPI is a 'technical change' that should have a limited impact on Network Rail (i.e. it should not affect the funding that we receive in CP6 in cash prices). ORR should ensure that it has identified all areas of the settlement that this change affects so that there are no unexpected consequences.

However, we do not support ORR's proposal to take rates for variable charges, calculated in 2017/18 prices, and index them by CPI for CP6. We consider that this approach would make variable charges less cost reflective because our maintenance and renewal costs increase by more than CPI each year. This means that if traffic levels turned out to be higher than forecast in CP6, the additional income that we would receive through variable charges would not cover our incremental 'wear and tear' costs.

We consider that a more appropriate and cost reflective approach to indexing variable charges in CP6 would be to:

1. Forecast in cash prices (i.e. uplifting for RPI each year) the amount of money that we expect to receive through variable charges in CP6. This would also reflect our forecast 'wear and tear' costs.

2. Calibrate rates for variable charges in 2017/18 prices so that we receive the same amount of money in cash terms as described in point one, above, assuming charges are uplifted annually for CPI.

The effect of this approach would be that charging rates in year one of CP6 would start off higher than ORR proposes in its consultation. However, over the control period we would not receive any more income, in cash prices, than if our charges were indexed using the CP5 approach (i.e. indexed by RPI).

We also do not agree with the approach set out in ORR's consultation on the contractual implementation of PR18 which proposes uplifting charging rates from 2017/18 prices to 2019/20 prices (the Initial Indexation Factor) using CPI. Our view is that we should use RPI for this uplift (and at the very least for the uplift from 2017/18 to 2018/19 prices) because it should reflect that RPI was used as the measure of inflation in CP5. The way the contract is currently drafting essentially assumes that CPI applied in CP5.

Our concern that if the Initial Indexation Factor remains as is written in the draft contracts, then we will end up receiving less funding in CP6 if ORR does not reflect this lower level of income in our wider settlement.

Price lists consistent with ORR's Draft Determination

On 31 July 2018 we published draft CP6 VUC price lists consistent with the policy set out in ORR's Draft Determination. These price lists were published following discussion with ORR to confirm that we had interpreted its Draft Determination correctly. For example, how the caps on VUCs should be applied to freight and charter train operators. The price list also reflects the improvements that we proposed in our May 2018 charging conclusions document.

We also published a note alongside the draft VUC price list, setting out our key assumptions and forecast CP6 VUC income (available on our website here).

Draft Determination Response – Asset Sustainability Summary

31st August 2018

August update

At the request of the ORR, on 13th July 2018 we submitted *version 1* of this document to help inform their development work on the Final Determination for PR18. This described how we would likely approach any additional expenditure targeted towards improving asset sustainability. A value of £933m for England and Wales was used for planning purposes.

Our main response to the Draft Determination describes how and why we believe that £538m should be directed towards additional asset sustainability activity. A full work up of detailed plans will be made by our route businesses during the autumn to reflect this as part of our next full round of business planning activity.

Section 0 of this update provides detail of how we have allocated the £538m to our England & Wales route business. Sections 1-6 remain as per version 1 of the document.

Allocation of funds

The initial allocation methodology between the England & Wales routes is described in section 4. The Directors of Route Asset Management took the opportunity to review the methodology so as to confirm how any final allocation would be conducted. Their consensus was to allocate money firstly towards the areas of priority identified previously by the Chief Engineer's team – updated with any new information – and then distribute the remaining funds across the routes proportionally to the remaining gap each route had to its original allocation. In this manner, they retained the principle of assigning the money on the basis of the overall long-term requirement of each route's asset base, but ensured that all critical areas had been addressed.

The Chief's Engineer's final list of high priority areas is given in Table 0.1 below.

								£m
	Anglia	LNE	LNW	South East	Wales	Wessex	Western	E&W Total
Track						80		80
Earthworks		30	65		20			115
Drainage	4				5			9
Tunnels		8						8
Total	**4**	**38**	**65**	**0**	**25**	**80**	**0**	**212**

Table 0.1 High-priority areas for investment as identified by the Chief Engineer's team through their assurance processes.

After addressing the high priority areas, the remaining £326.3m was distributed as per Table 0.2 below.

								£m
	Anglia	LNE	LNW	South	Wales	Wessex	Western	E&W Total
High-priority areas	4	38	65	0	25	80	0	212
Original allocation	77	225	222	145	66	87	110	932
Gap to original	73	187	157	145	41	7	110	720
Gap %	10.1%	26.0%	21.8%	20.1%	5.7%	1.0%	15.3%	100%
Remaining funds to allocate								326.3
Allocation of remainder	33.1	84.7	71.1	65.7	18.6	3.2	49.9	326.3
Total allocation	37.1	122.7	136.1	65.7	43.6	83.2	49.9	538.3
Rounded for communication to routes	37	123	136	66	44	83	50	539*

Table 0.2 Breakdown of allocation methodology to arrive at final England & Wales route businesses' figures for additional expenditure targeted towards asset sustainability.

** Note that the revised sustainability allocations – "Total allocation" row above – were rounded to the nearest £m for communication to the routes, to create simplicity for them to update their DD responses against. However, this creates a rounding error of £0.7m whereby at face value they actually total £539m, rather than the £538.3m.*

In line with the new allocations, we have updated our estimate of the associated schedule 4 costs needed when delivering the work. The estimates by route are given in Table 0.3 below. This cost needs to be included within the overall £539m increase above.

								£m
	Anglia	LNE	LNW	South	Wales	Wessex	Western	E&W Total
Schedule 4 estimate	0.1	4.1	26.6	21.3	0.09	5.2	0.02	57.5

Table 0.3 Updated schedule 4 estimates matching the revised route allocations for England & Wales.

The remainder of this document is as per the original version submitted on 13th July 2018.

1. Summary

In its Draft Determination (DD), ORR identified an extra £1bn of expenditure that could be made available from our Strategic Business Plan (SBP) through a combination of increased efficiency, reduced expenditure on research & development and increased property income. The DD set out ORR's view that this extra money should be used to improve the sustainability position presented in the SBP, with specific focus in certain asset areas.

In order to inform its Final Determination, ORR requested that Network Rail provide a submission on the 13th July outlining how this extra money would be spent and the associated potential impacts, particularly with respect to sustainability. To meet this challenge, an activity was undertaken to apportion the £1bn between the routes, after which each route was asked to identify how it would spend its allocation and to assess the potential impact of this.

Based on initial advice from ORR prior to publication of DD indicating that £1bn was a network-wide figure, £67m was removed from the £1bn to account for Scotland. The remaining £933m was divided amongst the England & Wales routes. The published Draft Determination later confirmed ORR's view that the £1bn represented an England & Wales total as there was not the same need to re-prioritise expenditure to address sustainability in Scotland[1]. The analysis in this paper therefore refers only to the England & Wales routes and assumes £933m apportioned between them.

The England & Wales routes had 3 weeks to develop their submissions and whilst the resulting work is a good starting point, it is important to recognise that this investment is in the early stages of development. The result of each route's position is summarised in Table 1.1 below:

	Additional CSI improvement from extra sustainability spend - end CP5 vs end CP6							
	Anglia	LNE	LNW	South East	Wales	Wessex	Western	E&W Total
Total	0.41%	0.64%	0.34%	1.06%	0.92%	0.76%	0.74%	0.62%

Table 1.1 Route summary of additional CSI improvements achieved by additional sustainability spend

It should be noted that the position presented is exclusive of Schedule 4 costs of approximately £78m which will need to be factored into the conclusion of this work (when added to the £933m, this still totals around the £1bn ORR made available).

The additional sustainability plans are presented here without prejudice should not be seen as committing Network Rail to accepting the conclusions set out in the DD. We will continue to develop the plans in this area and will set out our clear proposal in our response to the DD.

[1] See paras 26-27 in ORR's Draft Determination – Summary of conclusions for Scotland

2. Introduction

Asset sustainability challenge in the Draft Determination

The nature of the challenge:

- ORR identified areas in its Draft Determination (DD) where money might be made available from within our plan for other purposes.
- This money was assumed to come from an increased efficiency challenge, reduced research & development expenditure and increased income from property. These assumptions are being addressed through other workstreams.
- ORR also concluded that not enough money was being spent to improve asset sustainability in England & Wales and that the circa £1bn freed up based on these assumptions should be used for this.
- ORR's expectation is for the main focus of the extra sustainability money to be on track and earthworks, with drainage and metallic structures also receiving further attention.
- ORR requested that by 13th July we provide them with an indicative view of how the routes would spend any money available to improve asset sustainability and what this could be expected to achieve

This document provides our response on this asset sustainability challenge. It provides ORR with the best information possible given the timeframe available to help inform its conclusions in advance of the Final Determination (FD).

Overview of our response activity

On 30th May 2018, the seven England & Wales routes were formally briefed to identify packages of activity that would improve asset sustainability. Routes were issued with financial targets totalling £933m – see section 4 Allocation for further details of how this was split between routes. The principle guidelines for the route submissions were as follows:

- Works should be selected primarily to improve asset sustainability, though wider benefits such as train performance should also be factored in.
- The focus should be on earthworks, track, drainage and metallic structures. Other items should be included where a strong local case exists, and choices should not be limited only to assets that form part of the Composite Sustainability Index (CSI) measure.
- Other relevant factors that should be considered when selecting packages of work:
    - The best value work that fits the overall management approach for the route, including efficient unit cost
    - Confidence in deliverability
    - How existing efficiency plans will be affected
    - Criticality or specific local context of the assets
    - Availability of monitoring and maintenance controls.

The routes submitted packages of work on 22nd June for review by the Chief Engineer.

Review activity
Following the route submissions, the proposals were reviewed by:

- The Professional Heads of Asset – for appropriateness with respect to asset policy and the engineering case for the works
- The Advanced Analytics team – for calculation of the quantitative impacts on asset sustainability. Note that CSI impacts cannot be calculated for all asset types
- IP Track & High Output teams – for deliverability of proposed track works

3. Assumptions

In putting together their submission, routes were instructed to make a number of specific assumptions in order to maintain consistency of the overall submission. These assumptions are laid out below and hold true unless a route has specifically indicated otherwise in their documentation.

Schedule 4 (excluded and calculated separately)
The opportunity cost of working on the network is captured through Schedule 4 payments to train operators. The packages of work identified by the routes **do not** include allowances for such payments.

We have estimated that for the work items specified by the routes totalling £933m, the Schedule 4 costs are likely to be in the region of £78m.

The Schedule 4 calculation is carried out based on the route's view of access provision within their asset sustainability submission.

Based on this, a Schedule 4 cost per scheme is calculated. For maintenance this is based on Schedule 4 cost per £m spend for all asset types. For renewals this is based on Schedule 4 cost per £m spend for all asset types apart from track, where the calculation is based on km or S&C unit and signalling, which is based on the total cost of work done. The Schedule 4 rate varies depending on the asset and route.

Any sum given in the FD for improving asset sustainability would need to make allowance for these Schedule 4 costs, and we are keen to work with ORR in the run up to FD publication to develop the best approach of doing this.

Efficiency
The cost of all activity is post-efficient and, wherever possible, on the same basis as those used for the route strategic plans (RSPs). Any deviations from those used in the RSPs has been clearly indicated. For example, where using:

- a different rate for equivalent work
- a unit rate where the RSP uses scheme specific estimates
- a different assumption that impacts cost has been applied

Benefits
The benefits of each package of work have been described for a range of factors:

- Asset sustainability
- Train performance
- Safety
- Reliability / resilience
- Economic / financial

- Other

These have been quantitative where possible, qualitative otherwise. Where specific quantification of a benefit is not possible, but there is reasonable evidence to indicate a scale of result, ‘quantified’ entries have been made as follows:

- Significant disbenefit
- Marginal disbenefit
- No impact
- Marginal improvement
- Significant improvement

A marginal improvement/disbenefit is one that logically is valid, but is likely to be too small to be calculated with any useful level of confidence.

A significant improvement/disbenefit is one that could usefully be quantified given time or opportunity to do so.

Routes were request to state explicitly whether the benefits are assumed or calculated to be proportionally ‘greater than’ / ‘equivalent to’ / ‘lower than’ similar work already in the RSP.

4. Allocation

Method

At the time the allocation to routes was made, it was not clear whether the notional £1bn to be referenced in the Draft Determination was a network-wide total or for England & Wales routes only. Therefore, £67m was subtracted from the £1bn as Scotland's allowance on the basis of internal analysis provided by ORR.

The remaining £933m was divided amongst the routes using the ratios for asset sustainability established during the financial target setting for the previous round of business planning. The train performance component of the target setting methodology was excluded entirely from the allocation process. ORR later confirmed in its published DD that the £1bn was an England & Wales total. The resulting allocation between the routes of the £933m is set out in Table 4.1:

	£m							
	Anglia	LNE/EM	LNW	South East	Wales	Wessex	Western	E&W Total
Allocation	77	225	222	145	66	87	110	933

Table 4.1 Allocation to routes of additional sustainability spend

The allocation was sense-checked against the principle additional asset expenditure requirements identified in the asset policy assurance conducted by the Chief Engineer during the previous round of business planning:

£86m Track – Wessex
£65m Earthworks – LNW
£30m Earthworks – LNE/EM
£20m Earthworks – Wales
£4m Drainage – Anglia

Each route had been allocated broadly sufficient funds to address the specific areas identified in the assurance. It was noted that Wessex would have to spend their entire allowance on track related activity in order to align to those requirements identified by the Chief Engineer.

Possible alternatives

The Directors of Route Asset Management (DRAMs), supported by STE, have reviewed the allocation and have agreed that no further changes will be made to the allocation methodology at this stage. This position will be reviewed further by the DRAMs and STE over the coming months.

5. Results

Whilst each route believes it can make a strong case for the packages of work it has identified, to allow for the event that specific packages are not perceived to be sufficiently justified, a number of routes submitted additional packages of work over and above their target allocations. These would also provide further options in the event that substantial additional funding were to become available. Full details of all work proposed can be found in the route submission documents.

The route submissions within their target allocation are outlined in Table 5.1 and the resulting CSI improvements achieved by the additional spend are laid out in Table 5.2:

	£m							
	Anglia	**LNE**	**LNW**	**South East**	**Wales**	**Wessex**	**Western**	**E&W Total**
Track	11.9	114.7	47.0	90.6	29.3	80.3	43.7	417.6
Earthworks	5.0	22.9	60.0	-	33.0	7.1	8.3	136.3
Drainage	6.6	-	33.0	-	4.2	-	1.7	45.5
Structures	12.6	49.3	40.0	55.0	-	-	15.8	172.7
Ops Property	20.0	14.8	-	-	-	-	2.6	37.4
Signalling	20.6	11.3	-	-	-	-	24.0	55.9
Level Crossings	-	-	-	-	-	-	12.0	12.0
E & FP	1.2	12.9	20.0	-	-	-	-	34.1
Offtrack	-	-	22.0	-	-	-	2.0	24.0
Total	**77.9**	**225.9**	**222.0**	**145.6**	**66.5**	**87.4**	**110.1**	**935.5**

Table 5.1 Summary table of spend by route and asset

	Additional CSI improvement from extra sustainability spend - end CP5 vs end CP6							
	Anglia	LNE	LNW	South East	Wales	Wessex	Western	E&W Total
Track	0.07%	0.27%	0.09%	0.50%	0.25%	0.64%	0.25%	0.25%
Earthworks	0.01%	0.14%	0.09%		0.67%	0.12%	0.15%	0.13%
Drainage								
Structures	0.23%	0.11%	0.16%	0.56%			0.20%	0.18%
Ops Property		0.04%					0.02%	0.01%
Signalling	0.11%	0.08%					0.11%	0.04%
Level Crossings								
E & FP								
Offtrack								
Total	**0.41%**	**0.64%**	**0.34%**	**1.06%**	**0.92%**	**0.76%**	**0.74%**	**0.62%**

Table 5.2 Summary table of CSI impacts by route and asset

Chief Engineer's review

The observations in this section were endorsed by Jon Shaw, Chief Engineer.

Key conclusions

The routes planned use of £933m further investment is well directed to support sustainability.

The plans cover the critical areas of concern to the Chief Engineers at the time of the SBP. Whilst STE has not been asked to determine the allocation across routes, we would note that the allocation to Wessex route left them short of the funds necessary to remedy all the areas of concern. A wider discussion should be held on future allocations.

The planned activity has been modelled as contributing proportionally 50% more to sustainability as measured by CSI than the average impact of the SBP plan.

STE have the following key observations:

1. The remaining gap to steady state sustainability is acceptable as:
    a. The current forecast steady state sustainability volumes do not yet factor in the benefits to extended asset life and reduced costs that will flow from our technology programmes (see below);

   b. The route proposals for track do not yet include 'under sleeper pads' which are a core part of realising an extension in track life and thereby sustaining the network more cost effectively – routes are requested to include the use of under sleeper pads in line with policy. This will incur a small amount of incremental cost, with resulting efficiency delivered in the future;
   c. The principal asset risk areas are now covered by at least the advised 'minimum' levels of activity;
2. Network Rail will encounter emerging work during CP6, for example high consequence low frequency events such as earthworks failures, and will need to fund this from contingency or insurance cover. An estimated provision for earthworks of £185m is required.

What we said at SBP

At the time of the SBP, STE advised the Executive that renewal levels were below the level necessary to deliver sustainability and were lower than average renewals rates by between £3bn and £4bn.

STE did not believe that this gap needed to fully close as our plans included actions to reduce future demand for renewals through the Research, Development and Technology (RD&T) and Intelligent Infrastructure programmes. As an example, the technology developments in track over the last decade provide a realistic benchmark for the gains from future technology in terms of improved asset condition knowledge and the resulting reductions in renewals activity levels needed to maintain asset integrity and performance. The benefits from these technology developments equate to an improvement in asset life of c10%. Further detail on this will be provided by STE in a separate paper.

STE also advised of the need to provision around £400m to redress gaps between the minimum advised levels and the Routes' plans and that this could be addressed as required from the strategic investment fund. The specific concerns were follows:

- Activity levels in earthworks in LNW / LNE and Wales routes in baseline plan. To correct these anomalies would cost £115m.
- Likely levels of emerging costs in earthworks – location likely driven by weather extremes estimated at £185m.
- Track activity levels in Wessex and LNW although mitigated the planned levels were short of our advice by approximately £80m.
- Additional concerns were tunnels, LNE route £8m, and drainage, Anglia £4m and Wales £5m

Assurance findings

STE's assurance activity has been undertaken by the same teams as those who advised at time of SBP. Additionally, the modellers have re-run the sustainability forecasts to determine impact on CSI.

1. ***Have routes put forward compelling packages of work –***
   a. ***are the outcomes realistic and purposeful?***

   Answer: Yes. The work is well directed to address previous areas of concern and contribute proportionally more to sustainability than the baseline SBP plan.

b. are there any packages that should not be recommended to the Exec?

Answer: No, but note comments on retaining a contingency and under sleeper pads.

2. Have the routes prioritised the right work to meet the issues identified previously by STE?

Answer: Yes

The table below confirms the areas of concern noted at SBP and that routes have used funds to target remedies, within the funds available.

Summary of Route Proposed Investment

		£(k)						
	Network	Anglia Submission	LNE Submission	LNW Submission	South East Submission	Wales Submission	Wessex Submission	Western Submission
Track	**424,257**	11,900	114,717	47,000	90,600	29,340	87,000	43,700
Earthworks	**129,233**	5,000	22,943	60,000		32,990		8,300
Drainage	**45,505**	6,600	-	33,000		4,205		1,700
Structures (incl Tunnels)	**167,908**	12,600	44,508	40,000	55,000			15,800
Ops Property	**37,375**	20,000	14,775					2,600
Signalling	**55,928**	20,600	11,328					24,000
Level Crossings	**12,000**		-					12,000
E & FP	**38,835**	1,200	17,635	20,000				
Offtrack	**24,000**			22,000				2,000
Total	**935,041**	**77,900**	**225,906**	**222,000**	**145,600**	**66,535**	**87,000**	**110,100**

The key areas of concern identifed at SBP.

Activity levels remain short of long run averages but are now above minimum advised levels with the remaining gap deemed acceptable, as advised above dependent on the delivery of technology developments which will require appropriate funding.

The single area where a concern was raised but no additional activity identified surrounded a minor shortfall in E&P activity in Wessex. This was a secondary issue compared to concerns regarding track activity levels. The whole network position for E&P is improved by proposed actions in other routes.

3. ***What is the impact of the intended plans of Network Sustainability as measured by the Composite Sustainability Index.***

Answer: We have modelled the impact on CSI and have identified that these additional intended works deliver proportionally more direct impact to CSI at approximately 0.62%, compared to the average rate in the SBP for equivalent money which was 0.42%. This provides good evidence that the additional works are well focussed on work to address sustainability. The remaining deficit to modelled steady state investment is being targeted through our intelligent infrastructure and RD&T programmes. Available analysis shows that we will close the majority of this gap over the next two control periods through life extension and reduced activity costs. A separate paper is being produced to evidence these benefits.

IP deliverability review

IP is carrying out a deliverability review of the extra sustainability works in the context of the core plans presented in the SBP. Draft emerging conclusions from this review are presented below; more work is required to develop this further.

<u>Track and High Output</u>

he additional volume is welcomed in both enabling additional High Output system capability and supporting the IP Track contracts in the later years of the control periods. Routes have been pragmatic in ensuring that most planned work is proposed for Years 3-5 ensuring that both development and access/ resource planning can be achieved in a timely manner without compromising the safety or efficiency of the work.

<u>High Output</u>

Additional plain line volume in South East and Wessex affords the opportunity to mobilise an additional HO Ballast Cleaning System from year 3-5 in the 3rd rail areas. The rail and sleeper element of the Wessex work could be either delivered conventionally, via new PL/S&C contracts, or via the HO Track Relaying System, working alongside Western volumes.
Additional Ballast Cleaning System volume in LNE-EM looks like it could be blended within existing system availability by exploiting underutilised midweek capability.

<u>Plain Line/ S&C</u>

Most IP Track delivered volume is proposed from year 3 onwards, this is a pragmatic approach when considering that access for year 2 is in the process of being set. Injecting new volume into the early years could severely destabilise it and impact available materials and resources. The additional volume should enable further contract stability as the new PL/S&C + SCO contracts evolve over the control period.

<u>Cost and efficiency</u>

Checks on efficiency and headwind declarations at SBP will need to be revisited. It doesn't automatically correlate that greater volume will deliver the same or better efficiency or that the rate will remain the same. Routes have mainly used previously provided rates for SBP. That said, clearly there are opportunities to spread the fixed cost elements of both the PL/S&C contracts and the High Output over a broader volume which should improve efficiency.

LNW S&C
We previously noted in the track deliverability review for RF8 that LNW S&C refurbishment volume was already challenging. We have seen further volume is proposed. Noting that the intention is to grow the Works Delivery capability in LNW, it would seem prudent nonetheless to ensure that the whole volume is genuinely deliverable both from a resource and access point of view.

Earthworks
All routes consider their proposals deliverable with minimum risk to efficient delivery. This view is largely supported by input from deliverers with ongoing consultation and review taking place in most. It is recommended that where this is not the case, this engagement takes place at the earliest opportunity. It is considered that in the majority of instances the works should be planned for years 3, 4 & 5 and replanned if they are not already, to allow for planning of access and consents and to allow sufficient development time and workbank smoothing. Where works are planned for years 1 & 2, remits are required as a matter of urgency.

It is recommended that routes continue to engage with deliverers and lock down the workbanks as soon as is practicable. This will facilitate workbank stability and allow for development timescales, as well as allowing the supply chain further opportunity to make the most efficient use of resources, packaging and available access. It is worth noting that capacity of specialist suppliers (such as painting contractors) should be reviewed in all applicable routes. Further, the status of current frameworks in terms of capacity and performance should be reviewed, along with the impact where retendering of the contracts is planned.

Signalling
Three routes (Anglia, LNE and Western) have been allocated a proportion of the overall signalling asset sustainability budget. The high-level assessment focuses only on these routes and their submissions for signalling (including level crossings). The review examines the potential impact on deliverability in terms of additional volumes and the high-level timescales for delivery.

Overall, the proposals are considered deliverable in the context of the national CP6 signalling workbank as they represent a relatively minor increase to this and generally consist of minor works which require minimal access and design.

6. Next steps

This submission is an initial view of how routes would spend additional sustainability money. It provides the best possible information in the time available and is subject to the key assumptions listed above. We will continue to develop thinking in this area, including on allocation between routes and on how other sources of funds might relate to this (e.g. the Group Portfolio Fund, contingent renewals).

The dependency between this workstream and the others that would release money for this sustainability expenditure (efficiency, research & development, property income) should be noted, as well as the extra circa £78m of associated Schedule 4 expenditure which will need to be allowed for. The presentation of sustainability schemes here should not be seen as an acceptance of ORR's conclusions in the DD. We will present our clear position on this in our response to the DD at the end of August.

Our next full plan update will be at RF8. We will work with ORR to align this RF8 plan update with the Final Determination assumptions on additional sustainability expenditure.

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Network Rail's response to ORR's Draft Determination: Efficiency challenge

31 August 2018

Executive Summary

The key points we make in this response are:

- ORR has assumed that Network Rail can make further efficiency savings of £659 million during CP6. ORR provided limited evidence to support this.
- Our response commits to £491 million of additional savings, which includes £101 million reduction in our forecast headwinds and £390 million of efficiencies.
- This additional stretch, on top of the £1,579 million of efficiencies in our SBP, is an increase of around 30 per cent.
- Whilst clearly very stretching, the £491 million of savings have been accepted by routes and national functions.
- The savings we have committed to will increase the financial risk in our CP6 plan.

Purpose

This document is Network Rail's response to the efficiency challenge set out in ORR's PR18 Draft Determination.

In this executive summary, we set out:

- ORR's Draft Determination proposals;
- our proposal for further savings in CP6; and
- our concerns about ORR's proposals.

ORR's Draft Determination proposals

In the Draft Determination, ORR has assumed that Network Rail can make further efficiency savings of £659 million during CP6. This represents a significant stretch on our SBP, which included net efficiency savings (i.e. efficiency less headwinds) of £1,578 million, increasing the required net savings by over 40 per cent. By the end of CP6, the net efficiency in the SBP (7.5 per cent) would increase by more than two per cent.

In the following sections, we set out our proposal for further savings and our concerns about ORR's assessment of the proposed further savings.

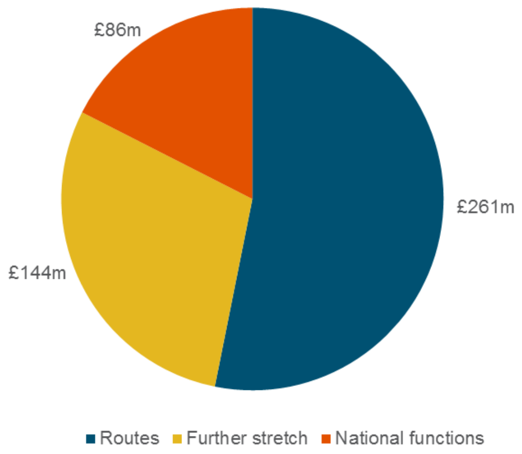
Responding to ORR's challenge

We recognise that forecasting efficiency savings is uncertain and requires judgement. In the light of ORR's challenge, our routes and functions have revisited their plans.

Routes and national functions have reduced the level of headwinds in the plan by £100 million, informed by further work carried out by Nichols, the independent reporter. They have also proposed additional savings of £246 million. This includes savings committed by national functions of £86 million. While these further savings are broadly owned at a local level, they are not yet underpinned by delivery plans and routes are concerned that they increase the risk to delivery of their plans. Further savings reflect each route and function's individual approach. We have not required a fully consistent approach so that we maintain local ownership which will increase the likelihood of successful delivery and benefit from innovation. The source of these savings is largely based on delivering further savings from the initiatives in the SBP.

While recognising the increased uncertainty, our proposal includes further route savings of £144 million to reflect potential unidentified further efficiency savings. The level of this further stretch takes into account the relative additional efficiency proposed by each route. These could be achieved, for example, through our ongoing standards review. While routes do not have specific plans, they have accepted these further savings, while again highlighting the further increases in delivery risk.

The total further savings of £491 million will largely be achieved by reductions in renewals costs.



The inclusion of these additional savings in our plan will increase the overall net efficiency savings during CP6 to £2,069 million. This is summarised in the Table 1, below.

While the reduction in headwinds affects the whole control period, the other efficiency savings are largely included in the later years of the control period to avoid undermining the stability of the plan in the early years of CP6.

This additional commitment seeks to maintain ownership of the plan at a route level, while delivering most of the additional savings that ORR proposed.

Table 1: Proposed additional savings

£m in 2017/18 prices	**SBP**	**DD response**	**Increase**
Procurement delivered route efficiency	392	408	16
STE delivered route efficiency	80	204	125
Route delivered route efficiency	201	215	14
Optimisation of access	190	210	20
Improved workbank stability	189	189	0
LEAN and other local improvements	169	253	84
Efficiencies linked to increased asset sustainability investment	-	45	45
Non route renewals efficiency	357	443	86
Opex efficiency	788	788	0
Total gross efficiency	**2,366**	**2,756**	**390**
Headwinds	(788)	(687)	101
Total net efficiency	**1,578**	**2,069**	**491**

Reviewing ORR's efficiency evidence

We have also reviewed the evidence for further efficiency that underpins ORR's Draft Determination. We have a number of concerns with ORR's analysis which we do not consider provides robust evidence for the increased savings.

ORR's proposed adjustment is based on quantitative analysis by the independent reporter, Nichols, of the headwinds that were included in the SBP, which totalled £787 million. ORR considers that most of the SBP headwinds were potentially double counted in the base costs, inadequately justified or could be mitigated by additional efficiency. These findings were supported by further qualitative analysis.

We summarise our concerns below.

An overlay to our plan

We are concerned that ORR’s efficiency assumptions are an ‘overlay’, which undermines ownership of the CP6 Plan at a local, granular level. This has been one of the key successes of the SBP, which we do not wish to see compromised.

Headwinds

We have worked with Nichols to understand better its review of the headwinds in the SBP. As a result, we continue to consider that most of the headwinds are legitimate cost pressures.

The inclusion of headwinds is a major step forward in our planning. We did not make a specific allowance for these cost pressures in our SBPs for previous control periods. We acknowledge, however, the potential for improving the quantification of headwinds in the future.

We accept that there should be a reduction in headwinds by £100 million on the basis that they have either been over-estimated or are difficult to justify, and are better represented as a risk to our plan. However, we cannot see any evidence to justify the removal of a further £559 million. In particular, no double counts were identified in the base cost by Nichols. We are also concerned that Nichols has noted headwinds are difficult to quantify resulting in uncertainty in their valuation (although it has not identified any adjustments that should be made). We note that both ORR and Nichols have recognised that the inclusion of headwinds is appropriate. It is therefore difficult to understand how the quantification of proposed efficiency savings by ORR is solely based on the analysis of headwinds.

Qualitative analysis

We have reviewed the qualitative analysis in the Draft Determination. We consider that there are a number of factors that ORR has not taken into account in concluding that our efficiency assumptions are conservative.

ORR states that “a period of unusually poor performance on efficiency” will have affected perception of what can be achieved in CP6. We are clearly very aware of the risk of committing to a level of efficiency that is not realistic. However, we do not consider that this means that our plan will include “inevitable conservatism”. While routes and functions have developed more detailed plans to underpin our efficiency assumptions, many improvements are still at an early stage of development. There is therefore a significant risk that our plans are optimistic and that delivery challenges have not been fully understood.

It is not inevitable that the significant cost pressures during CP5 will reverse during CP6. In particular, we expect the pressure on the availability of engineering access to continue which is a key driver of costs, maintenance and renewals costs will be higher due to the increase in the electrified network (for example due to additional isolation requirements) and it is unlikely that the increase in renewals costs (which largely reflects the Tender Price Index which increased by significantly more than RPI in CP5) will reverse due to the scale of infrastructure work in Great Britain over the next decade.

There are likely to be additional cost pressures during CP6. In particular, additional costs are likely to arise in CP6 as the industry delivers improvements that will be needed following the Glaister review of the causes of the major problems following the introduction of the May 2018 timetable. These could include additional resources to strengthen the capability of the System Operator.

Stable plan and route devolution

ORR considers that there will be further benefits from a stable plan. This does not appear to acknowledge that we have already included savings of £197 million as a result of more stable workbanks and £253 million reflecting early contractor involvement in renewals planning, which can only be achieved with a stable plan.

It further considers that the SBP has not reflected the full opportunities of route devolution. As our plans have been developed at a local level, this has given routes the confidence to develop stretching efficiency targets. Delivering the efficiency levels in the SBP will already require a much more disciplined approach. Our plan already reflects the effects of devolution and is underpinned by route ownership.

Base costs

The base costs in the SBP have been reviewed by ORR's consultants, Gleeds. It did not identify any significant errors that required adjustment. We recognise that the approach to costing our plan is complex, particularly the adjustments to 'normalise' current costs (i.e. remove one-off costs / outliers that are not expected to be incurred in CP6). As Gleeds has concluded that the approach to costing is reasonable, there does not appear to be any evidence that the base costs include "inappropriate inefficiencies". We consider that our approach to normalisation means that it is less likely that there will be a double count with the inclusion of headwinds.

Tailwinds

ORR is particularly concerned that the SBP includes almost no tailwinds. This is a reasonable challenge. However, we believe potential tailwinds are already included in the plan. Almost all cost reductions require positive management actions and therefore the impact of tailwinds will largely have been included within the overall efficiency savings. Recognising that ORR is concerned about how cost changes are classified, we want to work closely on the presentation of cost changes during CP6.

Specific examples of cost increases

ORR has provided some examples of potential tailwinds that it considers have not been reflected in the SBP. The most significant is input price inflation for IT costs which is expected to be lower than RPI. As part of our SBP, we provided ORR with overall input price analysis. This demonstrated that our overall costs generally increase by around 0.4 per cent more than RPI. This is broadly consistent with the total input price headwinds that we have included in the SBP. We therefore do not agree that the SBP has omitted input price tailwinds. However, we recognise that, while the aggregate input price inflation is broadly reasonable, there are likely to be inaccuracies in how input price inflation has been reflected in individual route and function plans.

Detailed response

1. Purpose

This document is Network Rail's response to the efficiency challenge set out in ORR's PR18 Draft Determination.

In the rest of this detailed response, we set out:

- ORR's Draft Determination proposals;
- our proposal for further savings in CP6; and
- our concerns about ORR's proposals.

2. Summary of ORR's Draft Determination efficiency challenge

In the Draft Determination, ORR has assumed that Network Rail can make further efficiency savings of £659 million during CP6. This represents a significant stretch on our SBP, which included net efficiency savings (i.e. efficiency less headwinds) of £1,579 million, increasing the required savings by over 40 per cent. As the further savings are likely to be delivered later in the control period so that we do not destabilise our plans in the early years of CP6, this would increase the net efficiency in the SBP (7.5 per cent) by more than two per cent. This significantly increases the risk of failure to deliver assumed efficiency savings.

3. How we have developed our CP6 plan

The SBP for CP6 is the most thorough plan submitted by Network Rail to date. Lessons have been learnt from CP5 and these have informed the way in which routes and national functions have developed their detailed bottom-up plans. All of the efficiency projects that will be delivered in CP6 have business owners, and we will perform a 'readiness' review in the first year of CP6 to determine how likely it is that these projects will deliver the benefits that we have assumed in our plans.

The greater detail behind the efficiencies in our plans for CP6, gives us, and should give ORR, confidence that these efficiencies are deliverable.

ORR's view that our plans are conservative appears to be based, primarily, on a concern that the levels of efficiency proposed by routes and national functions have been influenced by the issues with the delivery of forecast efficiencies during CP5. Therefore, ORR thinks that our SBP was biased towards understating opportunities to deliver cost savings in CP6.

It is right that both we, and ORR, learn the lessons from CP5 and that we do not commit to levels of forecast efficiency which are not achievable and that cause significant disruption during the control period when these efficiencies cannot be delivered. Our CP6 plans need to strike the right balance between:

a) including stretching efficiencies that provide a challenge to deliver improved value for money for customers and funders; and

b) being realistic about the savings, and having plans to deliver against our efficiency challenge, so that we do not need to undertake disruptive re-planning during the control period, if efficiencies cannot be delivered.

Our CP6 plan is set at P50, and so should include the level of efficiency that could be achieved at least 50% of the time. We have not planned for 'best case' efficiencies as this would not be consistent with a P50 plan.

In developing the SBP, routes and national functions considered the levels of efficiency that they thought were realistically deliverable in CP6, (i.e. forecast efficiencies consistent with a P50 plan). There was, however, considerable challenge from the Executive, over the two-year period over which the plan was put together. This was to ensure that route and national function efficiencies were sufficiently stretching.

4. Further efficiency challenge to routes and functions

> We summarise our views, below:
>
> - We have carefully considered what ORR has said about efficiency in its Draft Determination.
> - We have challenged ourselves (routes and national functions) to deliver ORR's efficiency challenge. This was an iterative process.
> - Routes and national functions have accepted £491m of additional savings, on top of those included our SBP submissions.
> - These savings are:
>   - £101m of headwind reduction
>   - £390m of efficiencies
> - These savings are very stretching. For example, £144m of efficiencies do not have associated efficiency plans.
> - If we were to stretch any further, this would result in routes disowning their plans.

ORR's efficiency challenge

ORR considered that the efficiencies in route and national function plans submitted as part of the SBP were not sufficiently stretching (i.e. that we should have included more efficiency in our plans than we submitted).

ORR set out a £659m challenge in the Draft Determination. However, ORR did not give detail of a route split or specifics about where that efficiency could be found.

Our approach to addressing ORR's challenge

We have carefully considered what ORR has said about efficiency in its Draft Determination. However, ORR provided limited information about where it thought we could achieve further savings.

We have challenged ourselves (routes and national functions) to deliver ORR's efficiency challenge. This was an iterative process. Without detailed information setting out the potential sources of further savings, our Business Review Team (BRT) had to work with routes to decide how to allocate this additional efficiency challenge between routes and national functions.

The initial method used to allocate the efficiency challenge between routes and national functions was to:

- ring-fence the Scotland value, which was separately identified in the Draft Determination, reflecting it was a separate determination;
- allocate the England & Wales values, based on:
  - requiring routes with lower net efficiency in the SBP to save more; and
  - the relative size of each route's cost base.

We made the assumption that the additional efficiencies would be focused on the last three years of CP6, and primarily focused on renewals. We made these assumptions so that plans for the first two years of CP6, were not compromised, and to increase the likelihood of success of any new plans. National functions were required to save 3% of their total cost base for renewals, again focused on the last three years of CP6.

We approached the challenge in three main phases:

1. Shortly after the Draft Determination was published, route and national functions were asked to identify further efficiencies in their plans, over and above their SBP submissions.
2. Following the initial proposals from routes and national functions, they were asked to identify the value of the additional efficiencies they had proposed that did not have associated local plans, and were an unidentified 'stretch'.
3. Network Rail's Executive reviewed route and national functions proposals, and applied stretch targets where appropriate. For

example, routes that had offered proportionately less efficiency than others, were challenged to include further efficiencies in their plans.

We took this approach because:

- we wanted to maintain local ownership of the revised plans;
- routes and national functions best placed to identify potential areas of further savings, reflecting local priorities; and
- routes and national functions would be able to reflect the additional efficiency challenge in the next iteration of their plans (RF8) to make the earliest start in developing plans consistent with the Final Determination.

As result of this process, routes and national functions have identified a further £491 million of efficiencies in their CP6 plans. The allocation of these efficiencies was based on several factors, including:

- route feedback;
- the size of the efficiencies included in SBP submissions;
- advice from STE about high priority areas for sustainability investment;
- judgement based on continued route ownership of the plan; and
- ensuring that Scotland's efficiency was consistent with ORR's Draft Determination assumptions.

Table 4.1 sets out the additional efficiencies by route and national function.

Table 4.1: Route and national function breakdown of additional efficiencies

Route	Total Headwinds	Efficiency	Additional Challenge	Final Total
Anglia	-3	-6	-21	**-30**
LNE EM	0	-81	-9	**-90**
LNW	-15	-38	-31	**-84**
South East	0	-7	-37	**-44**
Wales	-6	-4	-19	**-29**
Wessex	-4	-11	-13	**-28**
Western	-11	-20	-13	**-43**
Scotland	-32	-24	0	**-56**
Non Routes	-30	- 56	0	**-86**
Total	**-101**	**-246**	**-144**	**-491**

Table 4.2 provides a breakdown of the main sources of the additional £491 million of efficiency.

More detail about our efficiency plans is set out in Appendix D.

Table 4.2: Breakdown of main categories of the additional £491 million of efficiency

Efficiencies	SBP	DD Response	Movement
Procurement Delivered Route Businesses Efficiency	392	408	16
STE Delivered Route Businesses Efficiency	80	204	125
Route Delivererd Route Businesses Efficiency	201	215	14
Optimisation of Access	190	210	20
Improved Workbank Stability	189	189	0
LEAN and Other Local Improvements	169	253	84
Efficiencies Linked to the Sustainability Fund	0	45	45
Non Route Businesses Renewals Efficiency	357	443	86
Opex Efficiency	788	788	0
Total Gross Efficiency	**2,366**	**2,756**	**390**
Headwinds	**788**	**687**	**101**
Total Net Efficiency	**1,578**	**2,069**	**491**

5. Our view of ORR's Draft Determination proposals

Scope and background

This section summarises ORR's proposals related to the efficiencies and headwinds in our CP6 plans, and sets out our views on those proposals.

ORR's proposed adjustment to our CP6 plan is based on qualitative analysis by the independent reporter, Nichols, of the headwinds that were included in the SBP, which totalled £787 million. ORR considers that most of the SBP headwinds were:

- potentially double counted in the base costs;
- inadequately justified; or
- could be mitigated by additional efficiency.

ORR also considers Network Rail's plan is likely to be conservative as it will not have adequately reflected the opportunities to reverse the challenges that have arisen in CP5 nor fully captured the benefits of a stable funding environment and a devolved route structure. It also considers that potential tailwinds have not been adequately identified and that the base costs are likely to be overstated as they include CP5 inefficiency.

In the rest of this section, we explain our views on the evidence ORR has used to determine the value of ORR's additional efficiency challenge. We take the following issues in turn:

- size of ORR's challenge;
- overlay;
- headwinds;
- stable plan and devolution;
- base costs;
- tailwinds; and

- other issues.

For each area, we first summarise ORR's evidence and then explain our view about this evidence.

Size of ORR's challenge

ORR's Draft Determination

In the Draft Determination, ORR assumed that Network Rail can make further efficiency savings of £659m during CP6. ORR considers that the savings from these efficiencies should be diverted to fund additional renewals to support improved asset sustainability in CP6.

ORR's efficiency challenge was informed by its assessment of the headwinds in our SBP. We discuss ORR's assessment of these headwinds later in this section of our response.

Network Rail's view

ORR's additional efficiency challenge represents a significant stretch on our SBP, which already included net efficiency savings (i.e. efficiency less headwinds) of £1,578m, increasing the required savings by over 40 per cent. As the further savings are likely to be delivered later in the control period so that we do not destabilise our plans in the early years of CP6, this would increase the net efficiency in the SBP (7.5 per cent) by more than two per cent. Therefore, we do not think that ORR's £659m efficiency challenge is fully achievable in CP6.

ORR's efficiency assumption is an overlay

We summarise our views, below:

i. ORR's £659m efficiency challenge is an overlay, which has not been broken down by route, by initiative, or by department.
ii. This has made difficult for us to understand ORR's view and to challenge the rest of the business.
iii. The only 'number' that ORR has presented to justify its efficiency proposal is the disallowance of the £659m of headwinds.
iv. An overlay by ORR would damage route ownership of their plans.

ORR's Draft Determination

The size of ORR's efficiency challenge of £659m appears to be an overlay, which was justified using the findings of a review of the headwinds in our CP6 plans by independent reporters, Nichols.

Network Rail's view

We consider ORR's £659m efficiency challenge to be an overlay, which has not been broken down by route, by initiative, or by department.

Routes were surprised by ORR's approach because they understood at the start of this process that ORR's determination would be route-based. For example, routes have asked how much of the challenge relates to them. However, because of ORR's approach, this information is not available to us. This has made it difficult for us to understand ORR's view and to challenge the rest of the business.

The only 'numbers' that ORR has presented to justify its proposal is the disallowance of the £659m of headwinds. The £659m estimate is taken from Nichols' first review of our headwinds and efficiencies. However, this report did not provide any recommendations about our headwinds. We discuss this issue further in the 'Headwinds' section, below.

Routes and national functions have been challenged to find further savings in our plan to respond to ORR's Draft Determination. Routes and national functions have committed to deliver £491 million of savings, which is very stretching.

If ORR's final determination includes the full £659 million efficiency challenge, this will have the following consequences:

- ORR will have to decide how this is allocated to routes;
- such an overlay by ORR would damage route ownership of their plans;
- routes will have very little time to reflect the additional efficiency stretch in the plan; and
- the activity associated with re-planning could distract from preparations for delivery of outputs in 2019/20.

Headwinds

We summarise our views, below:

i. We disagree with ORR's use of headwinds as a proxy for quantifying it efficiency challenge.
ii. ORR has placed significant weight on a review by independent reporters, Nichols, of our headwinds. But ORR appears to have misinterpreted the findings of Nichols report correctly.
iii. ORR's use of our headwinds as a proxy for additional efficiency is contradicted by Nichols' view that our approach to identifying efficiencies is reasonable.
iv. A supplementary review by Nichols accepted the majority of our headwinds, with some of them having already materialised.

ORR's Draft Determination

ORR thinks that £659m of the headwinds included in our SBP submission are not sufficiently evidenced or justified. To support its view, ORR used the findings from the first Nichols review of our efficiencies and headwinds framework.

Nichols had concerns about the headwinds in our CP6 plan:

"We have a number of concerns regarding the use of Headwinds which taken together inform our view that the headwinds cost estimates are not justified. Our first concern is the interpretation of what is a genuine headwind as opposed to something that is either a known risk or should be accounted for in the core CP6 plan. Given our last point about the lack of transparency in unit rate changes for the core CP6 plan, it is not possible to establish if these headwinds are already accounted for in the core.

Secondly, there is no evidence of the headwinds cost estimates being factored down for uncertainty and to account for sensible mitigating actions that could reduce the impact of a genuine headwind. The overall *impression is that headwinds have been interpreted as a provision by the routes."*

Table 5.1 sets out the detail of ORR's view of the headwinds in our plan.

Table 5.1: ORR's assessment of headwinds in the SBP

Headwinds	**£m**
Funded in base plan	*130*
Should be in the base plan	279
Overlap with efficiencies	184
Should be in risk	54
Central adjustment	52
Uncategorised (50%)	89
Total	**788**
Total funded through DD	(130)
Total not funded through DD	**658**

Network Rail's view

The CP6 plan contained headwinds of £788m which are expected to have an impact in CP6. This is based on movement in costs from when the plan was created (16/17) and will therefore contain some headwinds which are expected to crystalise in CP5. The regulator believes that of this total, £659m is poorly justified and should not be funded leaving £130m which should be part of the Final Determination.

We disagree with ORR's use of headwinds as a proxy for quantifying it efficiency challenge

All business faces financial headwinds, which are difficult to quantify, particularly when planning five years out. ORR recognises that is it appropriate to include some headwinds in our plan.

If we were to remove the headwinds that ORR suggests (£659m), this would reduce the likelihood of delivering our plans (i.e. it would not be a P50 plan).

It appears that the use of headwinds as a proxy for potential additional efficiency savings is an arbitrary approach (i.e. headwinds and efficiencies are two entirely different things).

For the avoidance of doubt, our total CP6 plan is set at P50, including headwinds. The total value of headwinds in our CP6 plans reflect the expected value of costs increase in CP6 that are not in our control. We discuss some examples of significant headwinds in Box 1.

Box 1: Example of headwinds in CP6

Electrification in Western – Reading to Cardiff – New electrified asset which requires new maintenance and leads to a new requirement for isolation for renewals.

Reduced access in LNE / EM – new timetable leading to increased traffic and smaller access windows for completing maintenance and renewals. This leads to more possessions required to complete work.

Fatigue Management – introduction of new fatigue standards which will mean current rosters need to be altered to reduce hours per person. This leads to more individuals required to deliver rosters.

ORR has placed significant weight on a review by independent reporters, Nichols, of our headwinds. But ORR appears to have misinterpreted the findings of Nichols' report

Nichols, acting as an independent reporter, carried out a review of our headwinds and efficiencies framework.

A key issue with the first Nichols review was that it used a different definition of headwinds:

- Nichols considered a headwind to be an increase in cost that is known at the time of developing our plan; whereas

- we consider a headwind to be a factor which has a negative impact on the cost of delivery, that occurs after 2016/17 (the base year for our bottom-up plans), over which the business has no control.

Notwithstanding our concerns about Nichols' misunderstanding of our definition of headwinds, Nichols' did not provide any recommendations about our headwinds. This is illustrated by the following extract from its report, which discussed Nichols' views on the potential for double counting of headwinds:

"*Our first concern is the interpretation of what is a genuine headwind as opposed to something that is either a known risk or should be accounted for in the core CP6 plan. Given our last point about the lack of transparency in unit rate changes for the core CP6 plan,* ***it is not possible to establish if these headwinds are already accounted for in the core****.*"

ORR's use of our headwinds as a proxy for additional efficiency is contradicted by Nichols' view that our approach to identifying efficiencies is reasonable

The first Nichols report summarised the findings of its review of our CP6 efficiency plans. Our interpretation of Nichols' findings is that they considered our approach to identifying efficiency opportunities to be reasonable. Therefore, we do not think using this report as a way of justifying additional efficiencies is logical.

Box 2: Summary of Nichols' findings on our approach to identifying efficiencies in our CP6 plans

1. *"There is a consistent strong route ownership for efficiency plans.*
2. *The plans are compiled 'bottom up' as they are comprised of many separate initiatives; the exception being renewals in Anglia Route, which is discussed under Consideration number 6 below.*
3. *The documented rationale for including initiatives in the plan was stronger than for those initiatives that were not included.*
4. *Potential efficiencies have not been adopted where the industrial relations risk is high and considered by Network Rail to outweigh the benefits.*
5. *There is evidence of challenge and a sense check by senior management within the routes.*
6. *There is also evidence of challenging by the central Business Review Team (BRT) through their 'heatmaps' that make comparisons between the routes."*

A supplementary review by Nichols accepted the majority of our headwinds, with some of them having already materialised

The first Nichols report did not provide any firm recommendations about the appropriateness of the headwinds in our CP6 plan. For this reason, we commissioned Nichols, as independent reporters, to carry out a further review into headwinds.

Our interpretation of Nichols' second review findings:

- Most headwinds in our plan are both likely, and fit our definition of a headwind. Therefore, it is appropriate to make some provision in our plans.
- Nichols identified some potential for duplication of headwinds (i.e. this 'cost' could be included as a headwinds as well as a cost in

the base plan or as a financial risk. However, they did not find any specific examples of a double count.

- Nichols raised concerns with the quantification of headwinds. However, it did not attempt to quantify the issue (i.e. whether we have underestimated or overestimated headwinds). In fact Nichols thought that some routes may have omitted some headwinds entirely.
- Some headwinds have already materialised and should be part of the core plan. We have quantified the categories of headwinds identified by Nichols as £182 million. The breakdown is shown in Table 5.2, below.

Table 5.2: Breakdown of headwinds that have materialised in CP5

Headwind	Value	Reason for move to base costs
Apprentice Levy	51.1	Costs impacting in CP5
Holiday Pay	45.6	Costs impacting in CP5
Impact of Restructure	19.9	Expected to be completed by CP5 exit
Historic price Variance where CP5 averages used.	16.5	Will be part of the base rate at CP5 exit
Enhanced Security	16.0	Required to be operational by CP5 exit
CEFA	12.5	Volume element of headwind - to Scope
Reduction in Toilet Income	6.1	Expected to have impact by CP5 exit
Lease Costs at Ryton	4.0	Costs impacting in CP5
Route Services - CP5 to CP6 deferral	10.2	Volume change - move to scope
Total	**181.9**	

Box 3: Extract from the second Nichols report explaining that some headwinds may have been omitted from route plans

"In view of the consistent results gained from the sample assessment the detailed red / amber / green assessments may be considered as a reasonable indicator that similar results may be expected from the other four routes for the same headwinds. The Reporter does acknowledge that exceptions to this may arise, for example in instances where the sample has revealed that some valid headwinds were omitted by some routes."

We have further considered the headwinds in our plan, and consider that £508m of these should be funded in CP6.

We have set out our revised view of headwinds in Table 5.3, below.

Table 5.3: Network Rail view of headwinds for CP6

	ORR’s view (as set out in DD) £m	Network Rail’s view £m
Funded in the base plan	*130*	*508*
Should be in the base plan	279	180
Overlap with efficiencies	184	0
Should be in risk	54	70
Central adjustment	52	30
Uncategorised (50%)	89	0
Total	**788**	**788**
Total unfunded	**658**	**100**
Total funded in the base plan		**180**
Total funded	**130**	**508**

Stable plan

We summarise our views, below:

i. We agree that there are benefits from a stable plan.

ii. £197m of our planned efficiency relates to the benefits of a stable plan, which is ambitious. Therefore, we do not agree that there are further efficiencies from this.

iii. ORR has not provided an estimate of how much extra efficiency should be ascribed to the stable plan or route devolution.

ORR’s Draft Determination

ORR does not think that our SBP adequately reflected the efficiency gains that would be realised in CP6 from a more stable ownership and funding structure. However, ORR did not provide an estimate of how much extra efficiency we should ascribed to the stable plan

Network Rail’s view

We agree that there are benefits from having a more stable CP6 plan.

Work bank stability is about ensuring that works which have been planned go ahead, and no ad-hoc or surprise jobs are added to the workbank. We will achieve stability by ensuring work packages are planned bottom-up (site-specific) and that any additional work that is needed during the control period is incorporated into plan in advance so that the impact of this extra work on the deliverability of our overall plans is understood.

Stable workbanks will help to optimise the delivery of renewals schemes by avoiding peaks and troughs in activity. This stability will allow for effective resource planning to smooth out demand and optimise the use of constrained resources. Giving our supply chain a predictable workbank should also lead to improved unit rates.

Box 4: Example of benefits of a stable plan – LNW route

LNW route recognises that to deliver efficiencies based on a stable workbank, it needs:

- an integrated access plan; and
- a robust change control process.

In CP6, LNW is changing its approach to renewals so that its asset strategies to be based around a stable workbank and maintenance volumes.

To ensure that there is a stable workbank in CP6, LNW has taken the following steps:

- bottom-up workbank planning aligned with the maintenance strategy, which takes into account asset condition, risk and route-specific priorities;
- making sure that the workbank is deliverable; and
- more detailed planning to understand access demands.

Our SBP included £197 million of efficiencies that related to the benefits of a more stable CP6 plan. We think this is ambitious and we do not agree that we can take this further.

Table 5.4, below, provides the route breakdown of the forecast efficiencies in our SBP that result from a stable plan.

Table 5.4: Breakdown of SBP efficiencies from a stable CP6 plan

Route	**Identified Benefit** (£m in 2017/18 prices)
Anglia	16
LNEEM	44
LNW	34
South East	22
Wales	12
Wessex	34
Western	11
Scotland	15
Non-Route	8
Total	**197**

Route devolution

We summarise our views, below:

i. We agree that there are benefits from route devolution. This is why we restructured our business.

ii. Our CP6 plans are route-owned and bottom-up. We welcome that ORR has acknowledged the resulting improvements in our plans.

iii. A major benefit of route devolution is the better targeting of investment to local priorities. It does not necessarily lead to reductions in unit rates.

iv. ORR has not provided an estimate of how much extra efficiency should be ascribed to the stable plan or route devolution.

ORR’s Draft Determination

ORR identified Network Rail’s ongoing transformation (i.e. route devolution), as a source of efficiency that it considers has not been fully incorporated into the CP6 plans, submitted as part of the SBP. However, ORR recognises it is difficult to quantify the benefits of this transformation with any degree of accuracy.

Network Rail’s view

We agree that there are benefits from route devolution, which has been delivered as part of our transformation plan.

Our vision of a company based around high-performing devolved route businesses, operating within a national framework is central to our transformation plan. We have made significant progress in this area over the last three years.

Our transformation plan is based on three underlying principles:

- becoming relentlessly customer focused, with aligned incentives between devolved Network Rail routes and train operators – bringing ‘track’ and ‘train’ together for the benefit of local passengers;
- using competition, internally and in the external market, to drive innovation and efficiency, and reducing the monopolistic mindset of state supported industries; and
- attracting third party funding, capturing some of the economic value that improved railways create through jobs, housing and growth.

We have transformed the way that we plan and manage our business, which means that our CP6 plans are route-owned and bottom-up. We welcome that ORR has acknowledged the resulting improvements in the plans.

A major benefit of route devolution is more effective local decision making (i.e. the better targeting of investment to local priorities). It does not necessarily lead to observable reductions in unit rates. For example, a workbank that is responsive and better targeted can be more expensive for us and our suppliers to deliver.

ORR recognise the potential for devolution to increase costs as they note that devolution to routes initially led to increases in the scope of work in some areas, as local teams delivered additional work for their customers.

Routes are motivated to spend the funding available in a way that is most beneficial for customers and the long-term sustainability of their infrastructure. This means that routes target the ‘correct’ work and not, simply, a workbank that delivers lowest unit rates. Therefore, the decisions made by routes, and that are reflected in their plans, may not result in short-term efficiency savings. However, greater emphasis on local priorities should maximise outputs, increases reliability of our assets, minimise whole-life costs and improve the relationship between routes and their customers.

We have not explicitly identified unit rate savings in our plans that result from route devolution. This is because, as ORR recognises, these benefits are difficult to quantify. The financial benefits from route devolution are likely to be scope savings, which are already in our plan.

Base costs

We summarise our views, below:

i. We agree that it is necessary to remove ‘one-offs’ from the base costs used as the starting point for our CP6 plans.

ii. We carried out a thorough ‘normalisation’ process to remove one-offs from our 2016/17 base costs, which ORR’s consultants, Gleeds, found to be robust.

iii. We do not agree that base costs should remove all circumstances that have led to higher costs (e.g. inefficiencies) as this would lead to overly optimistic base costs, which would not be consistent with a P50 plan.

ORR’s Draft Determination

ORR thinks that the base unit rates used to develop our CP6 route and national function plans may be overstated. This is because it thinks that it does not have sufficient assurance that base rates reflect *“the context for [our] planning and delivery of work is significantly improved relative to the situation in CP5”* (i.e. ORR thinks we should have removed inefficiency in CP5 from the base unit rates that we have used to forecast CP6 costs). These findings influence ORR’s view of the scope for a greater efficiency challenge for Network Rail in CP6.

ORR appointed consultants, Gleeds, to review the approach we took to estimating CP6 costs for a sample of work types. Gleeds noted a number of issues, and whilst this review did not provide evidence to warrant adjustments in plans, ORR considered that it did provide evidence to support its view that significant further opportunities exist for Network Rail to “*deliver work below the cost included in its business plans*”.

ORR raises a number of specific concerns about our base rates:

- base rates may not have been fully normalised for ‘cost shocks’ so inefficiency may be included in the outturn costs;

- the 'normalisation process' we carried out will not have removed all of inefficiencies from CP5; and
- our base rates significantly exceed the rates used to inform ORR's PR13 determination (DP13), and this inefficiency has not been removed.

Network Rail's view

We disagree that our base costs are too high, However, we do agree that it is necessary to remove 'one-offs' from the base costs that we used as the starting point for our CP6 plans. This is primarily an issue for renewals because our costing approach used historic unit rates as the starting point for our CP6 cost estimates.

The base unit rates we used to construct our plans were 'normalised' so that they did not include one-off cost shocks, such as:

- in-year accounting adjustments (e.g. where cost is recognised in one year but volume is actually delivered in another;
- increased unit rates due to reductions in volume of work but sunk cost incurred;
- commercial claims in the rate which pertain to a prior year; and
- atypically complex projects with high project costs.

The purpose of this normalisation process was for routes and national functions to determine the most appropriate unit cost to use for each asset types and to:

- ensure more accurate costings;
- provide evidence to justify our costs are reasonable; and
- provide route management teams with information about the basis for their cost estimates.

Route and national functions were given freedom to use the unit rates that were most appropriate to their circumstances. However, they were provided with base unit rates by Infrastructure Projects (IP) to support their forecasts. These IP unit rates were based on 2016/17 outturn rates, uplifted to 2017/18 prices. These unit rates included IP's view of the headwinds and efficiencies in addition to the normalised base rates.

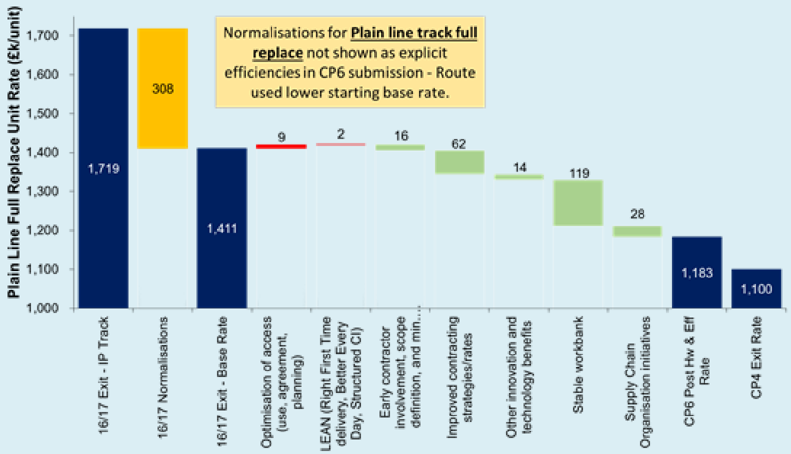
In general, the unit rates that routes used were lower than those provided by IP, as routes took different views on headwinds and efficiencies. Where routes used different unit rates from IP rates, this was done following extensive discussion with IP.

We describe our normalisation process in Appendix C.

Box 5: Example of LNE track (full replace) unit rate normalisation

Each route took their own approach to normalising unit rates. Chart 5.1 shows how LNE adjusted 2016/17 rates for a range of one-offs (£308m) per km of track renewal. This chart also shows the headwinds (red) and efficiencies (green) to arrive at the resulting CP6 unit rate, after normalisation and after reflecting efficiencies and headwinds.

Chart 5.1: LNE track (full replace) unit rate breakdown



In this example, LNE's normalisation process removed one-offs including: accounting adjustments (£88k); sunk / fixed cost for cancelled work (£236k); outlier worksites (£138k).

In CP6, LNW is changing its approach to renewals so that its asset strategies to be based around a stable workbank and maintenance volumes.

We address each of ORR's concerns about our normalisation process below:

Rates may not have been fully normalised for 'cost shocks' so inefficiency may be included in the outturn costs

One-off items, which caused the rate to be incomparable to future years, were removed before base rates were calculated. The Gleeds review acknowledged, our planning approach was robust and that routes had normalised their unit rates (see extracts from report below):

- *"Each asset type reviewed has a defined cost planning process which uses the "rate x volume = cost" approach. These processes are overall, in our view, sufficiently robust, subject to a realistic assessment of cost uncertainty."*
- *"Generally inputs have been developed in a robust way"*

Normalisation process will not have removed all of these inefficiencies

Removing inefficiency from a base rate after one-off items have been removed would give a 'post-efficient' rate (i.e. we would be removing costs from the base rate that required positive management actions to deliver). We do not think that this is appropriate. Removing inefficiency would lead to overly optimistic base costs, which would not be consistent with a P50 plan.

In developing our CP6 unit costs, we separately identified the efficiencies that could be delivered to reduce unit rates in CP6. Including efficiencies in our base rates would have understated the overall level of efficiency required to deliver our plans for the funding available.

Our base rates significantly exceed the rates used to inform ORR's PR13 determination (DP13 rates), and this inefficiency has not been removed

Rates in CP5 have been higher than both we, and ORR, expected at the start of the control period. There are a number of valid drivers for these higher rates. We discuss these below:

- construction costs have increased more than we assumed in CP5. The significant increase in the Tender Price Index (TPI), which track construction costs, above RPI demonstrates this issue;
- failure to hit planned exit rates in CP4 leading to a greater challenge in CP5; and
- change of mix of work done in each route to better reflect local customer priorities. This is characterised by routes often doing more complex and expensive work to meet customer needs, rather than simple high-volume cheap work.

None of the drivers, discussed above, should be removed from our base rate assumptions. This is because:

- **construction costs** – there is no evidence of construction costs increasing below RPI in CP6. The only circumstance we consider that this could occur is in a recession. Given our plan is P50 it is not appropriate to make this assumption.
- **exit unit rates** – we accept that it is disappointing that we have not hit our CP5 efficiency targets. The reasons for this are well documented. It will now take significant management time and effort to reverse the increases in our cost. It would inappropriate to assume these inefficiencies away instantaneously by adjust down our base costs.
- **work mix** – we think that the change in work-mix to better address our local customers' needs is a good thing. This is because we are doing the right work, in the right places, rather than doing 'cheap' work to chase low average unit rates.

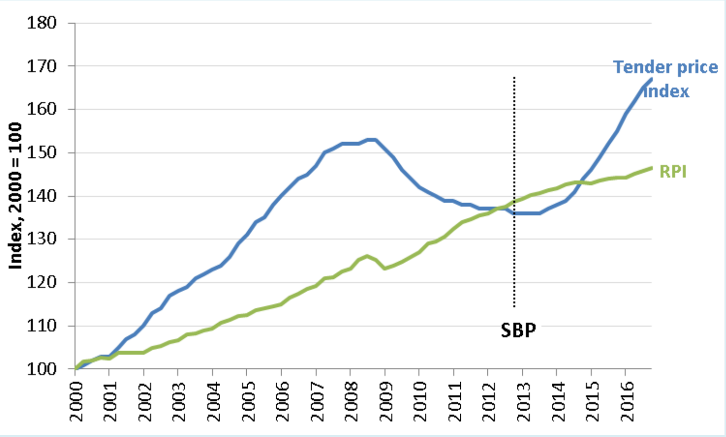
Box 6: Increase in construction costs over CP5

Historically, the construction costs that we face have consistently increased above RPI each year. The best available index which measures the inflation we face for these costs is the Tender Price Index (TPI).

The CP5 SBP was prepared at a time of falling contractor prices. The recession had supressed construction contractor rates significantly as companies reduced prices to remain in business. This led to a reduction in the cost of renewals work at the end of CP4, in comparison to expected increases which could have been expected against RPI. These lower prices were assumed in the forecast CP5 unit rates in our plans.

Since we published the CP5 SBP, the economy has recovered from the recession and construction prices have rebounded. Since the CP5 SBP in 2012/13, Chart 5.2 shows that TPI has increased 20% more than RPI.

Chart 5.2: Historic RPI and TPI



Tailwinds

> We summarise our views, below:
>
> i. We agree with ORR that some tailwinds may emerge in CP6, which need to be seen in the context of very challenging efficiency targets.
>
> ii. Tailwinds, by their nature, are highly speculative and difficult to accurately quantify.
>
> iii. We could have presented tailwinds in our SBP more explicitly but this would not change the overall value of funding we need in CP6.
>
> iv. Our plan was based on estimates of cost inflation that were net of tailwinds.

ORR's Draft Determination

ORR considers that our planning approach for CP6 led to a systematic bias in the cost forecasts, by recognising 'headwinds' without explicitly recognising 'tailwinds' in our CP6 plans.

ORR's Draft Determination set out some high-level examples of the tailwinds and opportunities to realise cost savings. These examples included the move to 'business as usual' planning and the establishment of a stable funding settlement. However, ORR provides limited information on specific sources of potential tailwinds, but did suggest tailwinds of £16 million in IT and £21 million in Support and Central functions.

ORR asked that we review the tailwinds in our CP6 plans to address what it considered to be an imbalance between headwinds and tailwinds.

Network Rail's view

In our business planning guidance, a tailwind is a factor which has a positive impact on the cost of delivery over which the business has no control. To be included in the plan as a tailwind, the factor must be:

- evidence based;
- calculable; and
- have a greater than or equal to 50% likelihood of occurring.

We agree that some tailwinds may emerge in CP6. However, many of the suggested savings that ORR considers to be potential tailwinds are highly uncertain, and, therefore, we do not agree that they should be included in our plan as tailwinds. We discuss this further in Appendix B.

It is fair to say that our SBP submission did not explicitly set out any tailwinds. We agree that we could have presented tailwinds separately in our plans. However, when putting together our plans, routes and national functions took into account factors that would both increase and decrease their costs in CP6. Effectively, they proposed a plan net of both headwinds and tailwinds combined.

Our SBP was constructed as a P50 plan. If we were to re-present our plan with the tailwinds separately identified, to get the plan back to P50, we would need to increase the headwinds or base costs.

Evidence from the second review Nichols provides support for this view as they found instances where "… *valid headwinds were omitted by some routes".* Our input price inflation analysis, discussed in Box 1, also exemplifies this point.

Our Draft Determination response includes stretch efficiency targets for routes and national functions. Therefore, tailwinds may help deliver against the £144 million of our efficiencies that we do not currently have plans for.

Box 7: Input price inflation

Shortly after the SBP, we carried out some analysis that we shared with ORR that demonstrates that, historically, our costs move above RPI each year (RPI+0.4%).

This analysis demonstrated that there are some areas of our cost base that move above RPI and others that move below RPI.

Our detailed CP6 plans did not explicitly reflect these 'ups' and 'downs'. However, overall, the total input price inflation effects included in our detailed plans are consistent with our central analysis.

If we were to re-present our detailed plans, we would show this as, for example tailwinds of RPI-0.2% and headwinds of RPI+0.6% (illustrative values only).

In order to fully consider ORR's points, we have considered the tailwinds suggested in ORR's Draft Determination.

However, the reductions in costs suggested by ORR need business effort (e.g. changes to contracting strategy). Therefore, for many of the areas where ORR suggests there may be tailwinds, we generally view these as efficiencies because they take effort and resource to deliver.

For IT costs, ORR has highlighted the potential for tailwinds. We think that where these exist, we have reflected them in a lower investment requirement. We have also factored below inflation increases when assessing contracting efficiencies.

One circumstance that could lead to lower than inflation cost increase is a recession. However, this is not something that we would include our P50 plan, given the uncertainty of this happening.

Other issues

We summarise our views, below:

i. ORR identified some relatively small potential cost savings, over and above our SBP.

ii. We employed EY to work with the business to perform a detailed review of these potential savings.

iii. Whilst none of these proposals are explicitly identified in our additional efficiency challenge of £491m, all of these costs are ultimately borne by routes.

iv. As part of the business planning process routes will review opportunities to deliver further savings to meet our £144m stretch efficiency challenge, and will consider whether further savings within central functions can be delivered.

ORR's Draft Determination

ORR identified some specific examples of where it thought we could make additional savings in our plan, over and above our SBP assumptions. These are largely focused on Support costs, and include:

- Asset Information Services and IT functions (potential tailwinds);
- Shared Services Centre – increasing the number of invoices processed by each employee – benchmarking suggested it was lower than our peers;
- HR Recruitment Costs – benchmarking suggested our costs were higher than our peers;
- Supply Chain Operations – consider some headwinds to be unjustified
- Contracts & Procurement – potential for further efficiencies;
- STE function – potential for further efficiencies; and

- Benchmarking – potential efficiencies from benchmarking exercises.

ORR did not quantify all of these suggestions.

Network Rail's view

ORR identified some relatively minor areas of costs that it considered were too high. We have carefully reviewed ORR's proposals and have responded to each of the main suggestions, in Appendix A.

We have not included any of these proposals explicitly in our additional efficiency challenge of £491 million but all of these costs are ultimately borne by routes. However, to deliver the £491 million of efficiencies, they need to find an additional £144 million of savings that are not currently supported by detailed efficiency plans.

As part of the business planning process routes will review opportunities to deliver further savings to meet this challenge, and will consider whether further savings within central functions can be delivered.

Specific examples of cost increases

There are also some specific examples of cost increases that ORR considers have not been justified, particularly within support costs. For example, additional RDG costs of £10 million within the Communications plan relating to the Britain Runs on Rail campaign, which ORR concludes is already reflected in the base costs. The Britain Runs on Rail campaign was funded within Finance in CP5, and these costs have not been included in the Finance plan for CP6. These costs have therefore not been double-counted.

Appendix A to this document sets out our responses to ORR's suggestions for specific areas of potential savings, where we have summarised our efficiency plans.

Appendix A: ORR's suggestions for specific areas of potential savings

In the Draft Determination, ORR identified some areas of costs that it considered were too high, and suggested that cost savings could potentially be made in these areas. We respond to ORR's main suggestions in this Appendix.

Asset Information Services / IT Tailwinds – Costs Linked to CPI

Following our Strategic Business Plan (SBP) submission, we submitted further analysis to ORR to support our view that the cost inflation we face is above RPI. Our detailed input price inflation analysis built on the previous approaches taken by consultants in PR08 and PR13 to estimate the input price inflation.

Based on our analysis, we estimate the blended input price inflation that we will face in each year of CP6 to be 0.4% above RPI (or 1.4% above CPI). This is consistent with the findings of ORR's consultants in PR13. It is also consistent with the total value of the input price inflation headwinds in route and national function plans as part of the CP6 Strategic Business Plan.

Therefore our plan would be unbalanced should we include specific tailwind where costs are likely to be less than RPI and not include greater headwind in areas where costs track above RPI.

HR Recruitment Costs Higher than Peers

We welcome ORR's recognition of the Hackett report and the conclusion that, overall, NR's HR function benchmarks well for cost efficiency compared to peers and world class organisations. HR has submitted 6.9% efficiencies as part of the CP6 plan representing a challenging target but one that it is committed to delivering. There are further efficiencies also included in the Business Services plan covering shared services.

Network Rail also recognises that there are further areas of opportunity which are still to be developed which will yield savings in the future. In the short-term standardisation and centralisation of our processes offers opportunities for further efficiency. In the longer term the use of new technology and automation will be considered - indeed a programme is in place for proof of concept. The implementation of new software in CP6 will yield savings across a number of areas, including within shared services, which will reduce the cost of recruitment which is specifically mentioned in the Draft Determination

Number of Invoices Processed per NR Staff Member was Lower than Peers.

Vendors can currently submit invoices in one of three ways. The split is largely driven by the diverse nature of our supplier base and the level of technical knowledge locally. The majority of paper and PDF invoices are processed by an OCR solution. Straight through processing rates have reduced over time (making us inefficient) whilst the percentage of vendors using EDI has remained static. This standstill position has meant in comparison to other shared services we may not be leveraging all possible efficiencies.

The recovery begins with the introduction of the latest ITESOFT OCR software –due to be deployed in August 2018 with a further update due in September 2018. The upgrade is expected to reduce many of the operational challenges. As well as improving the OCR solution we are also reviewing the vendor base to understand volumes / sensitivity / size and scale before offering technical EDI on-boarding support – in turn improving match rates (through front end validation) and reducing team re-work.

SCO Headwinds

Additional information on the Wheeled Plant headwinds has been provided as part of the Nichols review. This provides further evidence of the content and applicability of each of the headwinds in turn. We have taken into account the findings of the Nichols 2 review and have moved some headwind into the base plan. Those headwinds which Nichols observed to be likely and fitting the description of a headwind have been retained.

C&P

Within both the Route Services' plans and the Route Business' plans, there are some challenging efficiency assumptions in relation to potential contracts & procurement savings. Where possible, we will be striving for further efficiency but there are wider factors in relation to the industry we operate in and the supply market which can limit the level of efficiency possible and these are not mentioned / considered as part of the ECP document.

Civity Benchmarking

The ORR has summarised some of the key observations and recommendations of the Civity report commissioned by NR. STE has accepted these recommendations and are in the process of converting these into actionable plans.

It is important to note that many of the recommendations will not directly and immediately lead to cost inefficiencies being driven out but there will be scope over the medium term both directly and as an enabler. The scale of this is dependent on the areas of focus which are pursued through benchmarking for which Civity supported to develop a prioritisation framework. This will form part of an annual plan for benchmarking which will be created and enacted in CP6

STE

STE is managing well over three times the volume of Capex works in CP6 compared to CP5, and is also reducing the Opex budget throughout CP6 for Group STE. Therefore more output is being delivered with less budget.

Additional efficiencies will continue to be explored throughout CP6. STE aims to achieve capex efficiencies of £55m across CP6. £35m will be arranged through new commercial arrangements (£15m comprising a move to using managed services, and £20m through more effective commercial planning through, for example, Group STE having dedicated commercial and procurement resource). £20m will be achieved through a combination of improved planning and delivery of work and process improvements (such as lean and continuous improvements).

Appendix B: Review of ORR's suggested tailwinds

In the Draft Determination, ORR suggested some potential tailwinds for CP6. Due to the high level of uncertainty, we do not agree that they should be included in our plan as tailwinds. The reasons for this are discussed below.

The move to 'business as usual' planning and delivery of work

The framework against which the business developed their plans describes a tailwind as a factor over which the business has no control, and which has a downward pressure on costs.

The plan contains efficiency for a more stable workbank of £189 million and a further efficiency of £253 million of efficiency for early contractor involvement, early scope definition, and use of minimum specification solutions. We consider ORR's suggestion that the move to business as usual planning should be included as a tailwind to be incorrect - this is an efficiency, which is already included in our plan. Therefore, included business as usual planning as a tailwind this would result in the stretch of a current efficiency rather than implementing one that has been overlooked.

The establishment of a stable funding settlement, which provides committed government funding that the company can use for core spend and to meet a range of risks

There is no obvious difference between the environment at CP5 Y3 in which the plan was based and the environment that will be in existence during CP6. The business has been on a cultural shift throughout the control period to understand that there are cash limitations which limit output. The Cost Control Room has supported this cascade of a new culture around cash management.

The move to bottom-up planning, which provides a more detailed and stable basis against which to plan (in contrast to the top-down and high level plans that were in place for CP5)

We do not view this as a tailwind because this does not reflect cost reduction over which the routes have no control. It would take positive management action and improvements in planning for benefit to be realised. This is efficiency, and additionally, it is efficiency driven by improved planning compared to CP5 which is already built in to our SBP.

In addition, the CP5 plan is a bottom up plan. At each year in this control period, the business planning process requires for proceeding year forecasts to be built from actual projects at various stages along the approval life cycle. At the point at which unit rates were taken (actual delivery at 16/17), this had already been in place for a number of years. Therefore, benefits arising from simply having a bottom up plan are already factored in. Further benefits from bottom up planning, and planning in general, is efficiency already captured within the SBP for CP6.

The opportunity presented by comparison between routes, which provides more information and better reputational incentives on management teams

Our framework would not include the above as a tailwind. It cannot be described as "a factor over which Network Rail have no control but will have a downward pressure on cost". It would require significant management action to create a reasoned benchmarking approach, isolate where benefit could be achieved, and finally remove cost from the business. Our framework would describe this as an efficiency and not a tailwind.

Network Rail is investing heavily in benchmarking, including the creation of a demand model by route businesses to determine the number of individuals required by forecasting future workloads. ORR summarised some of the recommendations of the Civity report. STE are in the process of converting these recommendations into actionable plans which will be an enabler of delivering benchmarking efficiencies in the future. The live projects which are concerned with benchmarking are at a stage in which their benefits cannot be considered as P50 as they are still under development.

A regulatory framework of scrutiny, monitoring and enforcement that is designed for a public sector organisation

This would be a tailwind if the regulator is able to reduce our input costs without Network Rail having to complete any further realisation activity. We do not have the evidence to support this scenario, and as such, it would not be prudent to realise benefit in our plan.

The likely further efficiency savings that will be realised by the changes that the company put in place before submitting the SBP, those that will flow from the changes that have recently been made, and that are likely to flow from the ongoing process of transformation.

The framework by which the plan was created required the business to have a start point, for the most part, of 16/17. The business then described the movements from that time including the final two years of the control period.

The above assertion holds true in the event of a new efficiency programme being implemented between submission of the strategic business plan and the end of the control period, which was not foreseen. This is possible but our efficiency plans for the end of the control period and the information recorded and demonstrated within the Cost Control Room does not demonstrate any new efficiency which was not already forecast as part of our SBP.

Appendix C: Detail of normalisation process

Composition of the Base Plan

The business has constructed the renewals base plan using a combination of:

- IP provided unit rates
- IP provided unit rates which have been through a local normalising assessment
- Locally driven rates based on current delivery
- Deferred renewal and the associated contractor cost where this has been provided by the deliverer.

There is difference in approach between disciplines due to the appropriateness of using unit rates for cyclical or more standard work as is arguable within some track KVLs when compared to signalling where projects are bespoke and annual unit rate is inherently variable.

IP Provided Rates

IP provided rates to the business for use as a basis for construction of future plans which were based on 16/17 outturn uplifted to 17/18 prices or an average rate control period to date in 17/18 prices.

Figure 1, below, is a breakdown of the construction of the IP rate for Replace Full (10, 11, 14) IP Track Delivered unit rate in LNE. This is the same rate which is used in the review of the locally normalised rate approach which was an option for routes to take.

IP provided an itemised list of the various headwinds and efficiencies which should be considered for the post efficient / post headwind rate for CP6.

Figure 1: IP rate for Replace Full (10, 11, 14) IP Track Delivered UR Summary

Replace Full (10, 11, 14) IP Track Delivered	16/17 Hyperian Exit - Current Performance:	£1,719		
	Efficiencies	-£616	-36%	
	Inefficiencies	£112	7%	
	Headwinds	£9	1%	
	Tailwinds	-£40	-2%	
Expected Stage 4 RF9 Submission	Stage 3 IP Track Submission	£1,250	Expected Stage 4 RF9 Submission	£1,183

Base Rate

IP Calculated Post HW/EF

Route Rate Post HW/EF/ Normalisation

The routes could accept or reject those rates and the corresponding changes in cost expected before the end of CP6 or they could create their own rate based on their own bottom up assessments or by altering the normalisation already contained within the IP rates.

However, there was circular conversation between IP and routes where requisite challenge was provided on the inclusion or exclusion of IP normalisation from the route base rate.

Normalised IP Rates

IP provided rates were based on average delivery in year 3 of the control period or a control period to date average. A single year of delivery has the potential to have “one off” impacts such as a particularly complex piece of work and a materially differing workmix to what is planned in future years. This is especially the case where the comparably less complex work has been completed in the beginning of the control period.

Where data permitted, for each KVL or equivalent volume metric driving material amount of spend, unit costs were benchmarked against a range of comparable data points. Some examples of potential data points are given in figure 3, below.

The purpose was to determine the most appropriate unit costings to utilise by discipline and ensure:

- More accurate costings;
- Provide assurance evidence to substantiate and endorse our approach in the RSP (represents an enhanced management control and evidence suite); and
- Provide a reference document for management during CP6 delivery.

All rates were inflated to 17/18 prices for comparability, using RPI numbers provided centrally.

Having a range of data points allowed the output unit cost to be benchmarked against comparable rates, helping to identify and provide justification for the most appropriate unit rate used in the submission.

An example of route normalisation is shown in figure 4, below.

Figure 3: Examples of potential data points

Data Point	Disciplines	Description
National "Book" Rates	Signalling, Track, Structures	Rates provided by Infrastructure Projects (IP) or Business Review Team (BRT) that Routes have been advised to use for the CP6 submission.
Historic / CP5 Actual Rates	All	Calculation based on actual spend and volume delivered on projects completed within LNE/EM Route in the first 3 years of CP5.
Benchmarking to other routes e.g.. LNW	Selected disciplines where relevant	Calculation based on actual spend and volume delivered on projects within other comparable routes in the first 3 years of CP5.
CP4 rates	All	Based on actual spend and volume delivered on projects completed within the Route in CP4.
CP6 RAM forecast	All	Rates forecast by the route RAM team using models and/or engineering expertise and experience of similar projects delivered in the past.

Figure 4: example of Route Normalisation

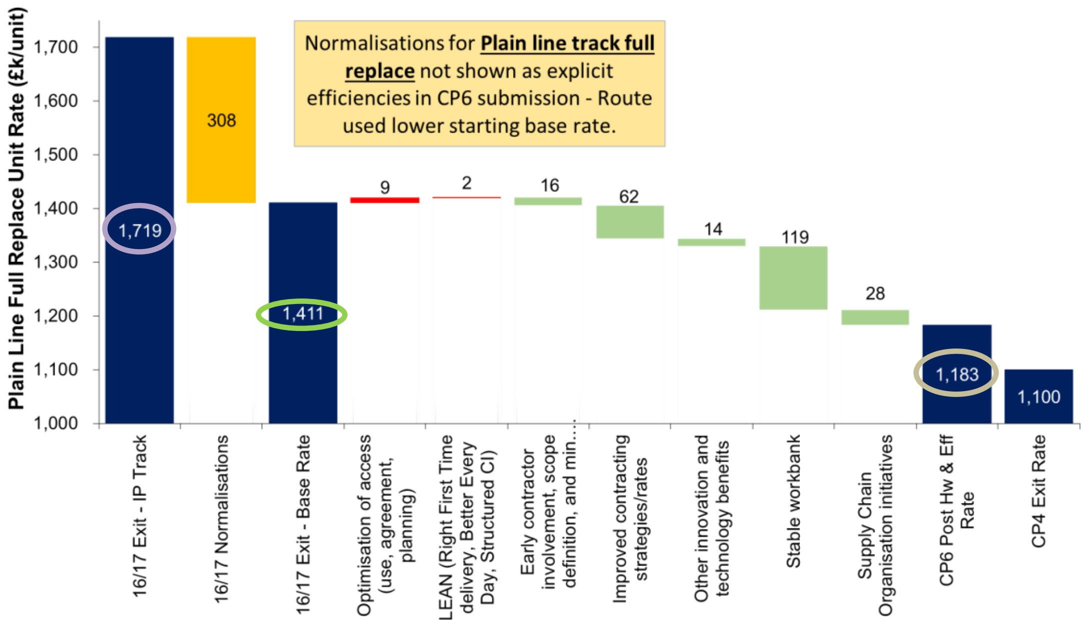
All data presented in 17/18 prices

Works description	Work type	LNE – Unit Rates: CP4 Exit Rates	Route Base (Ave CP5 Yr2-3)	IP Base (16/17 Exit)	Normalisation Adjustment	Normalised CP6 Base	H/W £ on UR	Eff. £ on UR	CP6 Rate (post-H&E)	Rate Source	RF11 Volumes	RF11 Costs
Plain line	Replace - full Cat 11 Replace - full Cat 14	1,100.3	1,270.0	1,718.6	-307.8	1,410.8	10.3	-237.7	1,183.4	IP Track Nov 17	121.5	171.4
	Re-rail Cat 2	183.6	n/a	n/a	n/a	218.0	-	-	218.0	WD LNE/EM rate July 17	304.2	66.3
	Re-rail Single rail											
	Re-ballast HO	328.6	536.6	657.0	-25.2	631.8	117.6	-205.2	544.3	IP Track Nov 17	72.6	45.9
	Re-sleeper, conventional	-	574.8	575.6	115.4	691.0	51.2	-45.2	697.0	IP Track Nov 17	30.0	20.7
	Re-rail, re-sleeper HO	821.2	764.8	682.0	94.1	776.1	234.7	-193.3	817.4	IP Track Nov 17	80.0	62.1
	Heavy refurb / Re-ballast conventional	388.7	n/a	n/a	n/a	602.5	-	-	602.5	WD LNE/EM rate July 17	33.7	20.3
	Med refurb conc		n/a	n/a	n/a	34.7	-	-	34.7	CP5 Historic	261.0	9.1
	Med refurb other	72.4	n/a	n/a	n/a	184.0	-	-	184.0	WD LNE/EM rate July 17	53.0	9.8
	Slab track											
	Rail Milling					39.9			39.9	Source: SCO Jan 18	300.4	12.0
S&C	Replace - full	737.9	725.0	995.5	-201.0	794.5	2.0	-154.7	641.8	IP Track Nov 17	180.0	143.0
	S&C Heavy Refurb [Replace - partial]	55.0	n/a	n/a	n/a	100.4	-	-	100.4	WD LNE/EM rate July 17	120.0	12.0
	S&C Medium Refurb	63.8	n/a	n/a	n/a	53.4	-	-	53.4	WD LNE/EM rate July 17	229.0	12.2
	Abandon					90.0			90.0		43.0	3.9
	Fencing					36.0			36.0	Off-Track RAM SAE Jan 18	776.7	28.0
Off-track	Other (off track)											12.0
Other												10.0
												-31.7
											2,605.2	607.0

PLAIN LINE - LNE ROUTE CP6 RATES (16/17 v CP6) — **Replace Full (10, 11, 14) IP Track Delivered - LNE**

17/18 Prices - £'000s — **16/17 Exit Rate: £1,719**

Adjustment	IP Track UR Adj %	IP Track UR Adj £	Adj Taken Forward	Categorisation
COWD adjustments relating to prior years	-2.54%	-£43.65	-£43.65	Normalisation
Overhead allocation in 16/17 (NR Mgmt and PSM)	-2.57%	-£44.13	-£44.13	Normalisation
Removal of the impact of S&C delivered Plain Line renewals (associated plain line works)	-1.10%	-£18.90	-£18.90	Normalisation
Sunk Costs for cancelled in 16/17 - right first time (volume assumed to be delivered)	-13.81%	-£118.66	-£118.66	Normalisation
Outlier worksites in 16/17	-2.97%	-£51.04	-£51.04	Normalisation
Fixed Costs (PSM)	-4.33%	-£74.42	-£74.42	Normalisation
Deliverability risk to reflect lost volumes	2.50%	£42.97	£42.97	Normalisation
			-£307.84	Normalisation
		Normalised Base Rate	**£1,411**	



The business then used this normalised rate in their base plan after conversation with IP on the suitability of their local changes.

Headwinds and efficiencies which start in CP6 were applied after the calculation of the base rate.

Critically, we can observe that in the movement from the rate provided by IP for use in the base workbank calculation to the route normalised rate, there are no headwinds included in that calculation which pertain to CP6.

Locally Driven Rates

Locally driven rates were used across all assets but much rate was driven locally where there is little precedent for baselining a rate from a national level or where individual projects have high degrees of variation that a bottom up approach is required. They were created using a combination of:

- ICM or other suitable models
- Local Engineering Expertise
- Actual Delivered Rates
- Bottom up calculation by project

Whilst this process was used across many assets, this process was often the case within signalling where the complexity and lack of comparability between projects means that rates need a significant amount of local input.

Example Signalling Process

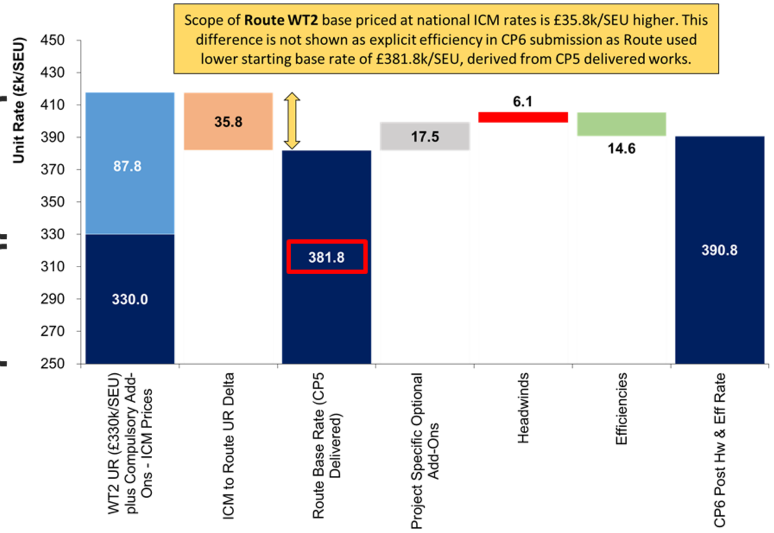
The workbank is based on detailed project plan that defines volumes to which unit rates are applied.

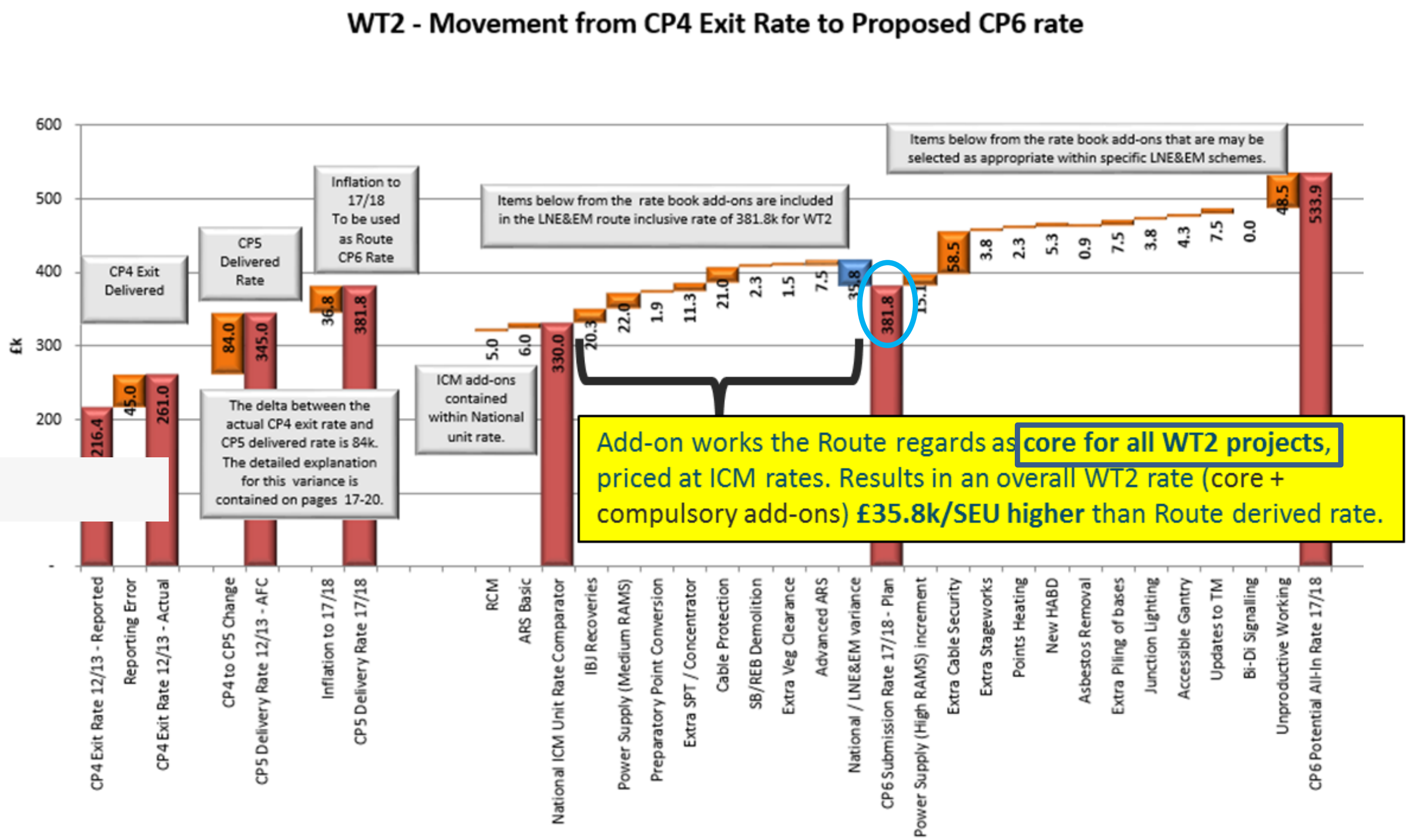
- Interlocking and Level Crossing workbanks are run through national Infrastructure Cost Model (ICM)
- ICM nationally recommended rates used, except for
  - WT2 and WT12 where Route used internally derived rates based extensive exercise with deliverers analysis CP4 and CP5 historic performance

The nationally recommended ICM (Infrastructure Cost Model) rate for WT2 is **£330k/SEU.** The Route examined all available 'add-on' works and identified key activities regarded as compulsory for all projects. As such, the Route increased the scope of a standard WT2 specification. The value of that increase in specification is £87.8k and related to the CP5 specification and is not representative of new expenditure for CP6. This is shown in figure 5, below.

Figure 5: example of ICM rate

WT	Cost (£k/SEU)
ICM Core Rate	330.0
Compulsory add-ons @ ICM price	87.8
Route WT2 base spec @ ICM price	**417.8**





Deferred Renewals

A significant proportion of the workbank for CP6 consists of deferred projects from CP5. Where those projects are of a level of maturity where they have been provided to deliverers for costs, those have been used in the CP6 submission.

Headwinds within the Base Plan

At no point in the planning process have headwinds which are new in CP6 been included in the base rate for CP6. There is no evidence of double count in any of the rates that we have reviewed. The approach used by the routes was to use existing rates and to apply normalisation where that rate has "one off" events within it which needed to be removed or where the workmix changes going forward. Within signalling, routes relied on the ICM model which is based on current costing and through which there is no recourse to add headwind.

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Network Rail's response to ORR's Draft Determination: **Group Portfolio Fund**

31 August 2018

Executive Summary

The key points we make in our response are:

- We have revised the route allocations of the Group Portfolio Fund to reflect our latest view of the financial uncertainty in our CP6 plan.
- We have allocated contingent renewals funding to routes.
- We have updated our governance proposals to strengthen route involvement. Governance arrangements for Scotland will be largely consistent with those in England & Wales.

Purpose

1. This document sets out our response to ORR's draft decisions about the governance of funding for financial risk in CP6. Our comments, here, build on the 'Group Portfolio Fund: Governance and Controls' paper that we shared with ORR in March 2018.

Our SBP submission

2. We want to use our full funding envelope to deliver improvements for customers in CP6. But, we do not want to commit the entire CP6 funding settlement to specific projects at the start of the control period because route circumstances, network priorities and risks can shift significantly over such a time period.

3. In our Strategic Business Plan (SBP), route budgets for CP6 were set at a level which provided sufficient funding to deliver plans around 50% of the time during the control period. This encourages the efficient delivery of outputs. However, we need to have greater confidence that we can deliver the outputs in our overall plan, which our customers and funders expect.

4. Our CP6 SBP included a Group Portfolio Fund (GPF) of £2.6bn (in 2017/18 prices) to provide headroom for financial risks that could materialise during CP6, allowing us to adapt and react to changes during the control period, without disruption to routes' core plans. This amount of headroom broadly reflects a plan that could deliver in 80% of scenarios we face in CP6 (P80) at a network-level.

5. Our SBP assumed that £0.7bn of this money was held and managed directly by routes, with the remaining £1.9bn held and managed at a portfolio level.

ORR's draft decisions on the Group Portfolio Fund

6. ORR's draft determination accepted the total value of the GPF of £2.6bn. We welcome this. ORR also accepted our proposals for the governance of route-held funding.

7. However, ORR's draft determination proposed that:
   a. £856m of centrally-held funding in England & Wales should move from the centre to routes, and should be allocated to 'contingent renewals';
   b. we reconsider how risk funding is allocated amongst routes, in a way that takes account of routes' financial uncertainty analysis; and
   c. we revise our proposed governance arrangements for centrally-held funding to include greater involvement from routes, and develop governance for contingent renewals funding.

8. ORR did not set out its views on the balance between route-held and centrally-held GPF funding in Scotland because discussions with Network Rail and Transport Scotland were still on-going.

Summary of key issues

<u>Allocation of the GPF to routes</u>

9. All of Network Rail's CP6 funding will be allocated to routes and System Operator funding settlements in ORR's final determination. This includes all GPF funding.

10. We have reviewed the allocations of route-held funding in our SBP

submission to reflect our latest view of the financial uncertainty in our CP6 plan. We have considered route analysis of financial uncertainty to inform these allocations.

Contingent renewals

11. We accept ORR's decision to move £856m of the centrally-held GPF funding in England & Wales to routes in the form of contingent renewals risk funding. We should recognise that this funding is as likely to be used for risks that materialise as it is for renewals. We have reflected this change in route business plans.

12. We have allocated contingent renewals funding to routes in line with our allocations of route-held funding.

13. The reduction in centrally-held GPF funding means that routes will now need to manage all but exceptional risks within their own funding settlements, including Schedule 8 risk.

14. Routes are continuing to develop the schemes that could be delivered using the entire GPF, should risk not materialise in CP6. Routes will incorporate this contingent funding in their plans as part of the CP6 delivery plan. However, the list of priority schemes will continue to evolve during CP6 in response to changing circumstances and emerging information.

Governance arrangements and route engagement

15. We have reviewed the governance arrangements for the use of the GPF in CP6. The corporate business planning process is still at the core of our proposals. However, we have strengthened the role that routes will play in deciding how money from the GPF will be used during CP6. For example, Route Managing Directors (RMDs) will now report directly to the Chief Executive and will play a key role in reviewing the release, and use, of the GPF.

Role of insurance

16. In CP6 our insurance strategy will continue to be set at company level, particularly the balance between the use of external insurance, self-insurance and Network Rail Insurance Limited. For CP6, routes will be charged a premium for insurance cover, subject to excess payments, which will form part of route budgets.

17. Route budgets, including insurance cover, reflect a P50 level of delivery. The GPF provides funding for financial risk over and above insurance costs to increase the likelihood of delivering our CP6 plan from P50 to around P80.

Interaction with government budgetary controls

18. We will face tighter government budgetary controls in CP6. The GPF funding falls within these controls. Although the 'financial controls framework' does provide us with some budgetary flexibility, such as the ability to carry forward up to 10% of unused capital budget into future years of the control period, it is more constraining than CP5.

19. These tighter controls mean that there is a risk of losing unused funding in CP6. Therefore, we cannot hold high levels of risk funding in our plans in any one year. Projects take time to plan and deliver and so we also need to make sure that GPF funding is released into route plans as soon as possible during CP6 so that we can use that funding to deliver additional outputs.

Scotland

20. There are separate funding arrangements in Scotland, which means that the GPF for Scotland will be ring-fenced and should only be used for financial risks associated with Scotland.

21. We expect the governance arrangements for the GPF in Scotland to be largely consistent with those in England & Wales. However, as ORR did not set out its draft decisions on the use of GPF in Scotland, we are continuing to work with ORR and Transport Scotland to agree the governance arrangements for CP6.

Detailed response

1. Purpose

This document sets out our response to ORR's draft decisions about the governance of funding for financial risk in CP6. This response builds on the 'Group Portfolio Fund: Governance and Controls' paper that we shared with ORR in March 2018.

This document also provides details about our revised proposals for the governance of the Group Portfolio Fund (GPF), and how this will be incorporated into our existing business planning processes.

2. Our SBP submission

In our Strategic Business Plan (SBP), route budgets for CP6 were set at a level which provided sufficient funding to deliver plans around 50% of the time during the control period. This encourages the efficient delivery of outputs. However, we need to have greater confidence that we can deliver the outputs in our overall plan, which our customers and funders expect.

Like all businesses, Network Rail faces risks which are hard to predict, especially as much as five years out. CP5 has demonstrated that network priorities and risks can shift significantly over such a time period.

Our CP6 SBP included a Group Portfolio Fund (GPF) of £2.6bn (in 2017/18 prices) to provide headroom for financial risks that could materialise during CP6 to allow us to adapt and react to changes during the control period, without disruption to routes' core plans. This amount of headroom broadly reflects a plan that we could deliver in 80% of scenarios we face in CP6 (P80) at a network-level.

Our SBP assumed that £0.7bn of this money was held and managed directly by routes, with the remaining £1.9bn held and managed at a portfolio level.

3. ORR's draft decisions on the Group Portfolio Fund

ORR's Draft Determination sets out a number of proposals for the CP6 GPF, which are to:

- accept our proposed value of the overall GPF of £2.6bn (in 2017/18 prices);
- move £856m for England and Wales from the centrally-held funding to routes. ORR expects this funding to be allocated to 'contingent renewals'. ORR did not set out its views on the balance between route-held and centrally-held funding in Scotland as discussions with Network Rail and Transport Scotland are still on-going;
- ask us to reconsider how risk funding is allocated amongst the routes, in a way that takes account of routes' financial uncertainty analysis;
- accept our proposals for the governance of route-held funding;
- ask us to develop governance for contingent renewals funding; and
- ask us to revise our proposed governance arrangements for the remaining centrally-held funding to include greater involvement from routes.

Table 1, below, sets out ORR's Draft Determination proposals for the allocation of the GPF for England & Wales and Scotland, compared to our SBP assumptions.

Table 1: SBP and Draft Determination allocations of GPF

£m in 2017/18 prices	**Route-held**	**Centrally-held**	**Contingent renewals**	**Total**
England & Wales				
SBP	600	1,711	0	**2,311**
Draft determination	600	856	856	**2,311**
Scotland				
SBP	60	224	0	**284**
Draft determination	284			**284**

In the rest of this document, we explain how we have responded to the points raised by ORR in its draft determination.

4. Allocation of the GPF to routes

All of Network Rail's CP6 funding will be allocated to routes and System Operator funding settlements in ORR's final determination. This includes all GPF funding.

The allocation of GPF funding to routes in our SBP submission reflected the main drivers of risk in our plans. Routes' financial uncertainty analysis suggested that financial uncertainty is greatest in renewals expenditure and from unplanned disruption (Schedule 8). Therefore, routes with higher levels of CP6 renewals expenditure, and greater Schedule 8 risk, were allocated more GPF funding in the SBP.

In our SBP, we used route analysis to inform the overall value of the Group Portfolio Fund. However, to allocate the GPF between routes, we did not want to rely solely on the route analysis because this could have provided an incentive to routes to be overly cautious in their uncertainty analysis.

We have revised the allocations of route-held GPF in our SBP submission. The revised allocations are based on the main drivers of financial uncertainty in route plans, which are:

- inflation being higher than forecast;
- efficiencies (both efficiencies in the SBP and stretch efficiencies in our draft determination proposal) being lower than forecast: and
- train performance being lower than forecast.

We have provided our latest view of the GPF allocations in Appendix A.

5. Contingent renewals

We accept ORR's decision to move £856m of the centrally-held GPF funding in England & Wales to routes in the form of contingent renewals. We have reflected this change in route business plans.

The reduction in centrally-held GPF funding means that routes will now need to manage all but very exceptional risks within their own funding settlements, including Schedule 8 risk.

We have allocated contingent renewals funding to routes, in line with our allocations of route-held funding.

Routes are continuing to develop the schemes that could be delivered using the entire GPF, should risk not materialise in CP6. Routes will incorporate this contingent funding in their plans as part of the CP6 delivery plan. However, the list of priority schemes will continue to evolve during CP6 in response to changing circumstances and emerging information.

We describe the governance for the use of contingent renewals funding in the next section.

6. Governance arrangements and route engagement

We have updated our proposed governance arrangements for the GPF to reflect ORR's draft decisions. The main features of the proposals are set out below:

- Routes manage their own route business plan through the business planning process, as they do now.
- Routes keep all of the money in their plans, including route risk funding, and if it is not required for risks, the routes have discretion about how it is spent.
- The majority of risk funding will be held in routes and, therefore, they will be responsible for managing all financial risk. Central GPF will be used as a backstop.
- The GPF would be used / reduced as part of the business planning process.
- Routes will have a central role in decisions about the use of the GPF.
- As a company, we need to release funding for risk as soon as possible during CP6 so that we can use all available funding to deliver additional outputs for our customers. As our exposure to risk reduces, the funding should be transferred to expenditure plans such as contingent renewals.
- We should not hold high levels of risk funding in plans in-year. This is because we will face tighter budgetary controls in CP6 and so we could lose unused funding. Therefore, in-year, we propose that the centre holds route risk funding on behalf of routes (c.£150m each year), primarily to cover Schedule 8 variances. This pools funding and avoids each route holding too much risk funding, that Network Rail could then lose if it is unspent (i.e. benefit from the portfolio effect).
- The centrally-held funding would only be used to cover potential underperformance. If a route draws on this in-year centrally-held funding, then this will be 'clawed back' from future years' route-held risk funding.
- We will hold the remainder of the GPF funding in later years of the CP6 plan, which reflects the greater degree of financial uncertainty in those years.

Appendix B sets out further details our governance proposals, including how the GPF will be incorporated into our business planning processes.

7. Role of insurance

Route budgets, including insurance cover, reflect a P50 level of delivery. The GPF provides funding for financial risk over and above insurance costs to increase the likelihood of delivering our CP6 plan from P50 to around P80.

In CP6, our insurance strategy will continue to be set at company level, particularly the balance between the use of external insurance, self-insurance and Network Rail Insurance Limited. For CP6, routes will be charged a premium for insurance cover, subject to excess payments, which will form part of route budgets.

During CP6, the value of claims by routes in any year may exceed the cost we have budgeted for in our plan, (i.e. claims may exceed the premiums charged to routes). In CP5, these additional costs are charged, or allocated, back to routes for regulatory reporting at the end of the year. However, for CP6 we propose that this additional cost is held at a portfolio-level so that the insurance arrangements for routes mirror those of external insurance.

8. Interaction with government budgetary controls

We will face tighter government budgetary controls in CP6. The GPF funding falls within these controls. Although the 'financial controls framework' does provide us with some budgetary flexibility, such as the ability to carry forward up to 10% of unused capital budget into future years of the control period, it is more constraining than CP5.

These tighter controls mean that there is a risk of losing unused funding in

CP6. Therefore, we cannot hold high levels of risk funding in our plans in any one year. Projects take time to plan and deliver and so we also need to make sure that GPF funding is released into route plans as soon as possible during CP6 so that we can use that funding to deliver additional outputs.

We will include GPF funding in our CP6 plans as 'resource' expenditure for government accounting purposes. This approach would provide flexibility to use this funding for risks that materialise in resource expenditure and to transfer any remaining GPF to capital expenditure, which can be used or carried forward to future years (subject to HMG budget limits on the level of change).

Appendix C provides further details on how we propose to include the GPF in route plans.

9. Scotland

There are separate funding arrangements in Scotland, which means that the GPF for Scotland will be ring-fenced. The GPF in Scotland should only be used for:

- risks that materialise in the Scotland route; and
- risks that materialise in national functions, which provide services to Scotland route. Any cost arising from risks that have materialised in national functions should be allocated to Scotland in proportion to the route's 'use' of these services.

We expect the governance arrangements for the GPF in Scotland to be, largely, consistent with the governance arrangements in England & Wales. However, there may be some differences. For example, there may be no formal distinction between GPF funding held in the route and at a portfolio-level. Therefore, we need to work with ORR and Transport Scotland to agree any specific governance arrangements for Scotland.

Appendix A: Allocations of GPF funding to routes

Introduction

This appendix sets out our latest view of route allocations of the GPF for CP6. ORR will allocate all available funding to routes and System Operator funding settlements in its final determination. This includes all GPF funding. Therefore, in Table A.1, below, we have allocated both route-level funding (including contingent renewals), and centrally-held funding to routes.

Table A.1: Allocations of GPF funding to routes

£m in 2017/18 prices	2019/20	2020/21	2021/22	2022/23	2023/24	CP6 total
Anglia	**21**	**41**	**54**	**74**	**63**	**254**
Route-held	6	11	14	19	15	66
Contingent renewals	9	16	20	27	22	95
Centrally-held	6	14	20	28	26	94
LNE & EM	**49**	**70**	**97**	**108**	**130**	**455**
Route-held	15	19	25	28	32	118
Contingent renewals	21	27	36	40	46	169
Centrally-held	14	24	36	41	53	167
LNW	**56**	**78**	**114**	**141**	**165**	**553**
Route-held	17	21	30	36	40	143
Contingent renewals	24	30	42	52	58	206
Centrally-held	15	27	42	53	67	204
South East	**35**	**66**	**89**	**93**	**111**	**394**
Route-held	10	18	23	24	27	102
Contingent renewals	15	25	33	34	39	147
Centrally-held	10	23	33	35	45	146
Wales	**12**	**22**	**30**	**35**	**38**	**137**

£m in 2017/18 prices	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**CP6 total**
Route-held	3	6	8	9	9	35
Contingent renewals	5	8	11	13	13	51
Centrally-held	3	8	11	13	16	51
Wessex	**20**	**30**	**55**	**66**	**72**	**242**
Route-held	6	8	14	17	18	62
Contingent renewals	8	11	20	24	25	90
Centrally-held	5	10	20	25	29	90
Western	**21**	**41**	**58**	**76**	**70**	**267**
Route-held	6	11	15	19	17	69
Contingent renewals	9	16	21	28	25	99
Centrally-held	6	14	21	29	28	99
England & Wales total	**214**	**348**	**498**	**595**	**652**	**2,307**
Route-held	64	93	129	152	159	596
Contingent renewals	91	133	185	218	228	856
Centrally-held	59	122	185	225	265	856
Scotland	**18**	**36**	**58**	**79**	**93**	**283**
System operator	**0.2**	**0.4**	**0.6**	**0.8**	**1.0**	**3.1**
FNPO	**0.1**	**0.2**	**0.2**	**0.2**	**0.3**	**1.0**
GB total	**232**	**385**	**557**	**674**	**747**	**2,595**

Appendix B: Governance of the Group Portfolio Fund

Introduction

This appendix provides further details of our revised governance proposals for the GPF for:

- route-held funding;
- contingent renewals funding; and
- centrally-held funding.

Route-held GPF

Table B.1, below, sets out:

- our initial governance proposals for route-held GPF from our SBP submission; and
- how we have revised our proposals since the SBP, which reflect further discussions with routes, and ORR's draft decisions.

Table B.1: Revised proposals for route-held GPF

Area	Initial Network Rail SBP proposal	Post-DD Network Rail proposal
Funding held at a route-level	£660m (£600m in England & Wales and £60m in Scotland).	No change. However, note that ORR is still considering the balance of risk funding between the route and the centre in Scotland so this may change.
What risks should this funding cover?	For business performance risk, e.g. missed efficiencies or higher unit rates. Not for inflation risk, which is covered by the centrally-held funding.	With lower levels of centrally-held funding, routes need to be responsible for managing all risk, except those that are truly exceptional. For example, route funding would need to cover inflation risk and normal business performance risk, such as Schedule 8 risk.
Allocation to England & Wales routes	Allocate funding to routes, weighted towards those with higher CP6 capex forecasts and higher historical (CP5) Schedule 8 costs. This reflects the sources of the greatest financial uncertainty in our plan.	To reflect ORR's draft decisions, we have incorporated the scale of routes' financial uncertainty ranges in the allocation of route-held GPF funding

Area	Initial Network Rail SBP proposal	Post-DD Network Rail proposal
Control of funding, if released for investment options	Routes able to agree to spend this money as part of the business planning process. Through the business planning process, routes would need to show that risk in their plan has reduced before releasing funding. This additional spend would, generally, not count against routes' FPM as it would be 'change-controlled' into route baselines.	No change
Control of funding, if used for risks that materialise	Routes expected to manage within their budgets before using this funding. The need for routes to draw on this funding is reviewed at each business planning stage. Use of route-held funding would, generally, count negatively towards FPM.	No change
Impact on scorecard outputs	Until this funding is released to deliver additional outputs, then no outputs associated with this funding will be included in route scorecards.	No change
Reporting	Report transparently on outturn income and expenditure during CP6, and explain variances from plan.	No change

Governance of contingent renewals funding, held at a route-level

Our SBP did not include contingent renewals. Therefore Table B.2, below, sets out:

- ORR's high-level governance proposal from its draft determination; and
- our view of how we think we can implement ORR's proposals in CP6.

Table B.2: Revised proposals for contingent renewals funding

Area	ORR DD proposal	Post-DD Network Rail proposal
Funding for contingent renewals	£856m in England & Wales moved from centrally-held GPF to routes to be held as contingent renewals. ORR has not confirmed the approach for Scotland.	Accept ORR’s proposal to move funding into contingent renewals.
What risks does the funding cover?	ORR thinks that route-held funding should cover ‘expenditure-level’ risks such as inflation.	With lower levels of centrally-held funding, it will only act as a back stop for routes for exceptional circumstances / events (for example, it would no longer cover inflation risk) so that individual routes do not lose funding to pay for issues in another route.
Allocation to England & Wales routes	ORR does not provide any detailed allocation rules but states that the allocation should take account of asset sustainability and whether the profile of financial risk across the routes affects the allocation, especially for smaller routes.	To reflect ORR’s draft decisions, we have incorporated the scale of routes’ financial uncertainty ranges in the allocation of contingent renewals funding
Control - use for investment in renewals projects	It is the each route’s decision whether to spend this funding on contingent renewals. However, routes must notify the centre on major spending intentions.	Decisions about the use of contingent renewals funding would be dealt with through the business planning process. Priorities for further investment will be kept under review during CP6 so it is possible that this funding could be re-allocated to other routes to address those priorities. ExCom will, ultimately decide whether to authorise requests.
Control - use for risks that materialise		Routes need to identify, and justify, the need to use this funding for risk, as part of the business planning process. ExCom will ultimately decide whether to authorise requests.
Impact on scorecard outputs	Until this funding is committed to delivering additional outputs, route scorecards will not reflect any outputs associated with this funding.	Agree with ORR proposal.
Reporting	ORR expects Network Rail to engage with ORR ahead of a decision from the centre to defer (or veto) a route’s spending decision, or to transfer funding away from a route.	Agree with ORR proposal All ‘cancelled’ schemes would be reported up through Board and DfT shareholder governance arrangements.

Governance of centrally-held GPF

Table B.3, below, sets out our revised proposals for the governance of the centrally-held GPF in CP6.

Table B.3: Revised proposals for centrally-held GPF

Area	Initial Network Rail SBP proposal	Post-DD Network Rail proposal
Total funding held centrally	£1.9bn (£1,711m in England & Wales and £224m in Scotland).	Reflect ORR's draft decisions to move half of the centrally-held GPF funding into routes for England & Wales (£856m remaining in centre). ORR has not concluded on the treatment of Scotland GPF so we need to agree the Scotland allocation with ORR/TS.
What risks does this funding cover?	Low-likelihood, high impact events such as significant weather-related events and above-forecast inflation.	With lower levels of centrally-held funding, it will only act as a back stop for routes for exceptional circumstances / events (for example, it would no longer cover inflation risk) so that individual routes do not lose funding to pay for issues in another route.
Allocation to England & Wales routes	Allocate funding to routes, weighted towards those with higher CP6 capex forecasts and higher historical (CP5) Schedule 8 costs. This reflects the source of the greatest financial uncertainty in our plan (allocated to routes in SBP for funding requirements only).	To reflect ORR's draft decisions, we have incorporated the scale of routes' financial uncertainty ranges in the allocation of centrally-held GPF funding
Control of funding, if released for investment options	The business planning process will identify the value of the GPF to be released prior to the start of each year and the proposed allocation of funding released to each route. ExCom will ultimately decide on the allocation of funding to routes. This additional spend would not count against routes' FPM as it would be 'changed-controlled' into route baselines.	Our proposals are largely unchanged from the SBP. However, we need to reflect ORR's draft decision that routes should have a greater role in the governance of the centrally-held funding. We will strengthen the routes role in the business planning process in CP6.
Control of funding, if used of risks that materialise	Routes would identify, and justify, the need to access the centrally-held GPF as part of the ongoing business planning process. ExCom will ultimately decide whether to authorise requests. Use of this funding to address risks would count negatively towards routes' FPM.	

Area	Initial Network Rail SBP proposal	Post-DD Network Rail proposal
Impact on scorecard outputs	Until this funding is released to deliver additional outputs, then no outputs associated with this funding will be included in route scorecards.	No change
Reporting	Funding allocations would be reported up through Board and DfT shareholder governance arrangements. Forward visibility provided as part of the business forecasting process. ORR will be able to review these decisions as part of its usual monitoring process.	No change

Appendix C: How will routes include the GPF in their plans?

Introduction

In this appendix, we provide further details about how we plan to include the GPF in our business planning processes and in route budgets during CP6.

Role of the business planning process in the use of the GPF

Our business planning process will be central to the governance of the GPF in CP6. The business planning process has a well-established planning cycle that has oversight from the Executive Committee (Excom). Route Managing Directors (RMDs) will now report directly to the Chief Executive and will play a key role in reviewing the release, and use, of the GPF.

As part of the business planning process, each year:

- routes and national functions will set out, in relation to financial risk:
    - their assessment of how the financial risks they face in the rest of the control period have changed since their last update;
    - the value of the route-held GPF that they wish to release into their budgets for the remaining years of the control period for:
        - the costs of risks that have materialised; and
        - delivering schemes to deliver additional outputs;
- there will be central assurance of the route and national functions assessments of financial risk;
- Excom and RMDs will review route and national function business plan updates, including their proposals for release of GPF funding;
- Excom and RMDs will agree the extent to which route (and if applicable, national function) proposals for the use of the GPF are consistent with the financial risks that Network Rail still faces, as one company, for the rest of the control period; and
- routes and national functions will update their plans to reflect the decisions made by Excom in time for the start of the next financial year.

How the GPF will be included in route budgets (in-year and future years)

<u>Summary</u>

Our proposals for how the GPF should be included in route budgets reflect that:

- historically, routes and national functions have underspent against their in-year budgets, and have sought to defer planned expenditure (and associated funding) to future years; and

- projects take time to deliver so we need to make sure we do not lose 'unused' money in the GPF if it is not spent in-year. This is a risk because we face tighter government budgetary controls in CP6, which means that if we underspend against our budget within a year, we could lose that funding.

Table C.1 summarises how we intend routes to include in the GPF in their budgets

Table C.1: Route budgets and the GPF

<table>
<tr><th>Category of funding</th><th>In-year</th><th>Future years</th></tr>
<tr><td>Route-held</td><td rowspan="2">No route-held contingency within the current year to reflect the tendency of routes to underspend against in-year budgets.</td><td>Route-held funding will be included as opex (or 'resource'), which can be transferred to capital if, and when, required.</td></tr>
<tr><td>Contingent renewals</td><td>Routes should identify contingent renewals projects (held outside the plan) and, until that spend is committed, it should be included as opex (or 'resource') in route plans.</td></tr>
<tr><td>Centrally-held funding</td><td>A small amount of centrally-held funding in the plan to cover in-year underperformance (c.£150m) for risks such as Schedule 8 risk as opex (or 'resource'). Routes can draw on this 'pooled fund' during the year, rather than each route holding separate in-year contingencies. If a route draws on this centrally-held funding, then this will be 'clawed back' from future years' route-held risk funding</td><td>Centrally-held funding will be included as opex (or 'resource') in the plan until it is released to routes as committed expenditure.</td></tr>
</table>

<u>Example of releasing the route held Group Portfolio Fund during CP6</u>

In this section we provided an example of how routes would include GPF funding in their budgets as the control period progresses. This example is illustrated by Figure C.1, and explained in the text, below.

- In Year 0 (i.e. before the start of the control period), routes will assess the business risk they face in Year 1 as part of their business planning process and determine, from the GPF:
    - any funding that is required for risks that have now materialised for Years 1 to 5 – Year 1 (and Year 2 to 5 if applicable) budget will include funding for additional costs over and above the original baseline spend;
    - risk funding to be deferred to future years (i.e. Year 2 to 5) – this would only be applicable where the risk for future years has considerably increased, (i.e. the route's risk profile has changed); and
    - funding that is no longer required for risk will be released into route budgets so that the routes can plan and deliver additional projects (contingent renewals).
- Prior to the start of each year, route-held GPF will be converted into planned expenditure as part of the business planning process each year. If risks have not materialised, it will be released for contingent renewals. This means that, in-year, routes will not hold any route-held GPF.

- If routes face further unexpected circumstances, in-year, and require additional funding (e.g. due to higher than forecast Schedule 8 costs), they may be able to access the relatively small amount of centrally-held GPF. Routes will be expected to have shown how they have tried to manage the additional costs that they faced from within their own budget. However, if a route draws on this centrally-held funding, then this will be 'clawed back' from future years' route-held risk funding (i.e. the centrally-held, in-year, GPF acts like a loan for a route).

Figure C.1: Illustration of how the GPF will be included in route budgets during CP6

£m - Final Determination	Now **Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Route budget		400	500	400	500	400
Risk funding		10	20	30	40	50
Total		**410**	**520**	**430**	**540**	**450**
£m (Year 0) – business planning for Year 1		Now				
Route budget		400	500	400	500	400
Risk funding		0	20	30	40	50
Release of risk funding to cover new costs		5				
Release of risk funding for contingent renewals		5				
Updated budget		**410**	**520**	**430**	**540**	**450**
£m (Year 1) – business planning for Year 2			Now			
Route budget			500	400	500	400
Risk funding			0	30	40	50
Re-profile of risk					(10)	10
New risk funding					30	60
Release of risk funding to cover new costs			15			
Release of risk funding for contingent renewals			5			
Updated budget		**410**	**520**	**430**	**530**	**460**

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Network Rail's response to ORR's Draft Determination: Research & Development

31 August 2018

Contents

Executive Summary

We acknowledge ORR's concerns with the scope, focus, governance and deliverability of R&D and have addressed these with a radically reworked plan.

We have focussed our revised plan on infrastructure R&D with a heavy emphasis (55 per cent) on asset sustainability driving at least £2.2 billion benefits in reduced renewals over 20 years across the whole network (In our summary response, we have used a slightly more conservative estimate of £1.8 billion).

The £100 million investment for R&D proposed in the Draft Determination is insufficient for efficient and sustainable asset management and would be less than half our total R&D investment in CP5.

Our re-scoped and prioritised plan offers high value for money from £245 million investment matched with £112 million from third parties to give a total investment of £357 million in CP6.

The costs and benefits are robust, having been built using both top-down and bottom-up analysis, incorporating adjustments based on historical rates of success. High value for money is still delivered under stress testing with 40 per cent less benefits. We will carry out a formal programme review in early 2021 and, if progress lags expectations, redeploy funding into asset sustainability investment.

We have simplified governance, applied a proven delivery approach and incorporated learning from CP5 to assure deliverability. The recently established supplier-driven partnership with universities (UKRRIN) ensures academic research is successfully industrialised.

Our revised plan is supported by the routes; and industry supports a greater level of funding than that proposed in the Draft Determination. Transport Scotland and the Department for Transport will be engaged with the R&D programme through a new advisory board.

1. Research and Development (R&D) de-risks technology. It builds the business case and supports first in class deployments, leading to new capability to improve safety, reliability, cost efficiency and growth. Our future success is critically dependent on the right investment in R&D.
2. Our R&D plan has been comprehensively reviewed and reworked to reflect the concerns and priorities set out by the ORR in the Draft Determination. It is supported by the routes, delivering improvements to support the policy objectives of the Department for Transport and Transport Scotland in areas such as asset performance with track, structures and earthworks, weather resilience and safety.
3. The plan has been closely scrutinised and is fully supported by our Executive. It forms an integrated part of key improvement programmes.

Scope and level of investment

4. The ORR raised concerns with the scale of R&D spend given that we reported our R&D funding from HLOS in CP5 as £34 million (ref 7.80). However, that 'strategic R&D fund' only reflected a small part of our investment in R&D. In CP5 and previous Control Periods, much of our R&D activity was delivered as part of individual investment projects or transformation programmes. Our total R&D investment was over £200 million in CP5. So £100 million R&D investment in CP6 would halve current funding at a time where we need to drive increased efficiency through R&D.
5. In developing our SBP, we decided to bring together our R&D activity as a step towards better management of R&D to support our primary goals of asset sustainability, network performance, safety, security, cost efficiency and network growth. Key improvement programmes are dependent on the R&D plan, having no R&D funding of their own: Intelligent Infrastructure; Shift2Rail; the National Security Programme; the Home Safe Plan; and Digital Railway.
6. Our plan remains aligned with the industry's R&D plan that was developed under the Rail Delivery Group and Rail Supply Group for the whole railway system, reflecting the needs and views of customers, funders and stakeholders. However, re-scoping our R&D plan means we are now only partially delivering the industry's plan. Achieving improvements across the railway as a whole system will

require complementary investment from other sources.

7. Our re-scoped and prioritised plan requires £245 million of direct investment from the SoFA matched with £112 million of third party investment to give a total investment of £357 million.

Return on investment, robustly assessed

8. The ORR raised concerns over the strength of our evidence (ref 7.81).

9. Analysis of the improved interventions from our re-worked plan over the next 20 years (CP6 to CP9) forecast undiscounted benefits of £3.7 billion and costs of £1.0 billion with an NPV of £1.6 billion. The plan contributes to better performance with 13 per cent of the discounted benefits (over £0.3 billion) arising from reduced Schedule 8 costs.

10. Our R&D plan, sized at the level now proposed with 55 per cent of investment on track, structures and earthworks, is an integral part of our asset sustainability plan. It delivers a substantially greater benefit to asset sustainability than applying the same investment to increase the delivery of renewals. With a benefit cost ratio of 3.2, it drives at least £2.2 billion benefits in reduced renewals over 20 years across the whole network. Additionally, when the R&D plan outputs are implemented as improved interventions, the benefits are sustained cumulatively through subsequent Control Periods.

11. In our summary response to the Draft Determination, we include an estimate of the asset management benefits from our proposed investment in R&D and Intelligent Infrastructure of £1.8 billion between CP6 and CP9. This estimate is conservative as it does not cover the full range of assets that benefit from R&D.

12. The re-worked plan has been made robust by combining a project-based view and a top-down assessment. The resulting evaluation of benefits, costs and phasing has been stress-tested under scenarios that reduce benefits by 40 per cent and delay deployment by a year across the programme. The plan remains high value for money. Tools and processes developed under our Commercial Accelerator directly mitigate these programme level risks.

Proven record

13. We are confident about our ability to reduce levels of demand for future renewals by exploiting the outputs of R&D, as this is a continuation of our current track record for exploiting R&D benefits but with a step up in scale and pace.

14. Over the last 15 years focussed R&D-enabled programmes have enabled us to make a real difference to our asset management. R&D investments have led to significantly better asset reliability with a 40 per cent reduction in service affecting failures for track and a 70 per cent reduction in the number of broken rails since the start of CP3. It has also enabled us to revise our asset policies and reduce the level of renewals investment by £1.5 billion over CP4 and CP5.

15. R&D-enabled new capability, developed as a result of investment in CP5, has led to £175 million of benefit being included in the baseline plans for CP6 which would otherwise not have been available.

Governance and deliverability

16. The ORR expressed concerns over the governance of our plan (ref 7.85). We have strengthened governance with the responsibility for funding decisions sitting fully within Network Rail. Investment decisions will be governed through well-established processes under our Investment Regulations.

17. The governance structure for R&D, which has been operating in CP5, involves route customers and stakeholders through an R&D Board and investment decision panel. Investment decisions will take into account advice from industry customers and stakeholders through a new advisory board acting under the Technical Leadership Group but accountability will sit with the Group STE Director.

18. To improve the quality of governance, we have introduced improvements to reflect the different risks and issues with R&D compared to renewals and enhancements including a gated process under the Rail Industry Readiness Levels framework which draws on best practice for R&D management from other industry sectors.

19. Our plan applies learning from the delivery of R&D in CP5. Our approach in CP5 put too great an emphasis on developing technology without sufficiently understanding how it could be exploited. For CP6, our governance applies a framework that looks beyond progress of the technology itself to ensure it is being industrialised to enable supply at

scale and commercialised to enable uptake by customers.

20. Whilst our R&D projects in CP5 were shaped by business requirements, they were only loosely connected to business improvement plans. For CP6, investment is clearly linked to business improvement plans strengthening the pace and confidence for R&D to be routinely exploited by the routes.

21. In CP5 we procured R&D ad hoc with the primary focus on successfully de-risking the technology. For CP6 we are applying a procurement strategy using innovation partnerships to take R&D into the supply of products and services.

22. We are confident in the deliverability of our plan. As well as learning from R&D in CP5 it adopts our MSP4NR proven approach for delivering improvement programmes, used to deliver ORBIS in CP5 which at £330 million is of similar size to our re-scoped R&D plan.

Matched funding and the Industrial Strategy

23. The ORR expressed an expectation for high levels of matched funding in CP6 (ref 7.85). We have opened discussions for £112 million of supplier and infrastructure manager funding. Our track record for third party funding is strong, securing £68 million in CP5 including one third from suppliers and the Shift2Rail programme and half through Innovate UK and the Engineering & Physical Sciences Research Council.

24. Funding from other infrastructure managers not only increases the return on investment but generates a shared commitment to success with other infrastructure managers and suppliers.

25. This R&D investment supports wider government objectives, set out in the UK Government's Industrial Strategy white paper (published November 2017) and the Scottish Government's policy to increase inclusive economic growth, by connecting universities with industry through the UK Rail Research and Innovation Network, underpinning the growth of companies in the rail supply chain, supporting export opportunities and enabling the rail sector to compete domestically and globally in the future world where mobility will be offered as a service.

Detailed response

Our approach

26. We acknowledge the concerns with the R&D plan raised by the ORR in the Draft Determination. The ORR expressed concerns over several areas of the plan:

    1. the scale of R&D (ref 7.80)
    2. that R&D investment could be traded for other work to raise average asset condition (ref 7.23)
    3. strength of evidence (ref 7.81)
    4. clarity and likely effectiveness of governance (ref 7.85)
    5. an expectation for high levels of matched funding (ref 7.85)

27. We have addressed each of these concerns by fully reviewing our existing proposals and recasting the plan and associated governance processes. Our revised plan incorporates the following key features:

    a. A re-scoped and prioritised plan with total gross investment (including matched funding) around 150 per cent of current levels. Our plan focuses on improved performance, safety, security and efficiency of infrastructure assets – **scope and level of investment**

    b. R&D investment at a level that delivers high value for money and supports an improving position for asset sustainability – **return on investment**.

    c. A **robust assessment** of benefits, costs and phasing.

    d. Evidence of a **proven record** of achieving substantial value from R&D for asset sustainability

    e. Stronger, simpler governance to strengthen accountability. The adoption of a well-planned approach, using MSP4NR proven approach for programme delivery, to manage the increase in R&D investment and learning from R&D delivery in CP5 –

governance and deliverability

f. Securing additional value by building on our track record of matched third-party investment and that also supports wider UK and Scottish government objectives – **matched funding and the Industrial Strategy**

This document sets out our Plan under these key features.

28. The Research and Development (R&D) plan builds new technical capability. It creates technology demonstrators that support first in class deployments which lead to new 'business as usual' capability, driving new value from the railway to improve safety, reliability, cost efficiency and growth with a key area being asset sustainability.

29. The R&D plan drives new technical capability across the CP6 plan. It is the sole means to fund technical capability that is not available to buy off-the-shelf. Key areas of the CP6 plan dependent on investment in R&D are: Efficient Asset Management including Intelligent Infrastructure; Shift2Rail; the National Security Programme; the Home Safe Plan; and Digital Railway.

30. Building new capability starts with ideas. R&D is the process of making an idea tangible, de-risking the product (systems or equipment) or service used to deliver the idea and building confidence in the business case.

31. The R&D journey is different for every idea depending on the maturity of the technology used, how easy it is to apply and integrate with legacy processes and equipment, how readily it can be supported and maintained and the challenge of realising customer benefits and generating supplier revenue. But the process is the same: Research to build the concept, develop to prove the concept, industrialising the concept to enable the technology to be produced and supported at scale, creating a viable commercial proposition and first deployment.

32. This process is enshrined in a framework, developed with industry during CP5, that sets out a common view of the state of readiness for R&D. It underpins governance and delivery management – the Product Development framework.

33. To get the most value from R&D we have placed a heavy emphasis on delivering differently to accelerate better commercial outcomes for R&D, creating opportunities for the market and encouraging third party investment. This builds commitment from third parties as 'skin in the game' and provides an important strand of our 'open for business' commitment that followed the review by Professor Peter Hansford.

Scope and level of investment

34. Our previous R&D plan was scoped to deliver the industry's R&D plan for the whole railway system – the Rail Technical Strategy Capability Delivery Plan. The industry plan was developed under the Rail Delivery Group and Rail Supply Group for the whole railway system, reflecting the needs and views of customers, funders and stakeholders. The 12 capabilities proposed for development under the plan are shown in Figure 1.

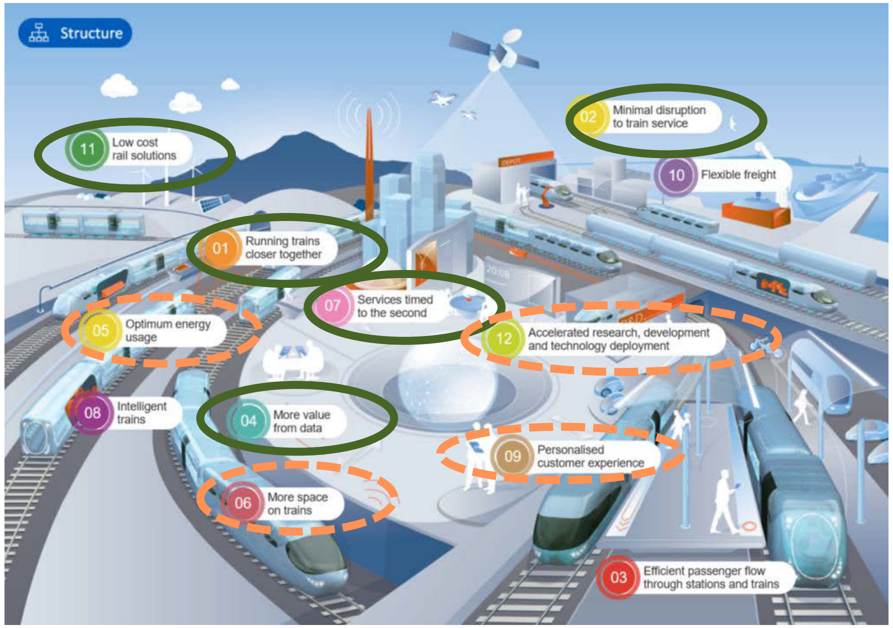


Figure 1: Contribution of our R&D plan to the scope of the industry R&D plan

35. However, the ORR raised concerns over the scale of R&D (ref 7.80) and where it was targeted, with a particular concern that more needed to be achieved to raise average asset condition (ref 7.23)

36. We have re-scoped and prioritised our plan which is now prioritised to deliver improvements for the rail infrastructure against our primary goals of asset sustainability, network performance, safety, security, cost efficiency and network growth.

37. The R&D plan benefits the whole network, recognising that it is funded by both the UK and Scottish governments. The R&D programme will deliver benefit across the aims of the Scotland route business plan with trials anticipated in Scotland to improve earthworks and drainage. Further information on how the R&D plan supports Scotland are set out in Appendix A.

38. Whilst our plan remains aligned with the industry's R&D plan its re-scoping means we are now only partially delivering the industry's plan. Achieving improvements across the railway as a whole system will require complementary investment from other sources.

39. The direct investment in our Plan offers substantial delivery for 5 of the industry's 12 key capabilities (01, 02, 04, 07 and 11) with partial delivery against a further 4 capabilities (05, 06, 09 and 12). This position is summarised in Figure 1 with substantial delivery circled solid green and partial delivery circled dashed amber.

    a. In some cases this partial delivery is light – for example it is only Shift2Rail that contributes to the personalised customer experience capability 09. Shift2Rail is intended to take R&D to a demonstration of the technology leaving industrialisation, commercialisation and first deployment to be completed through other funding.

    b. R&D covering wider objectives beyond these priority areas, and in particular 4 of the industry's key capabilities in Figure 1 are not within the scope of this R&D plan and core funding needs to be found from other sources.

40. £245 million of direct investment from the SoFA is matched with £112 million of third party investment to give a total investment of £357 million. This investment is allocated across 5 key programmes:

- Efficient Asset Management including Intelligent Infrastructure
- Shift2Rail
- Home Safe Plan
- National Security Programme
- Digital Rail

The key programmes are summarised in Figure 2.

R&D Plan key programmes	Programme Cost		Example R&D projects	Example Benefit
	Direct funding	Indicative 3rd party funding		
Efficient Asset Management including Intelligent Infrastructure	£126m	£43m	Predicting failures and degradation	30 per cent across all asset types (eg £21m saving in Signalling delays in CP6)
Shift2Rail	£15m	£10m	New track systems	30 per cent reduction in point failures
Home Safe Plan	£38m	£25m	Improved Automated Half Barriers (AHB+)	40 per cent risk reduction at AHB level crossings
National Security Programme	£23m	£4m	Prevention of hostile trespass	£7m saving in trespass delays in CP7
Digital Rail	£43m	£30m	ETCS Level 3	£16m-50m saving in Signalling Equivalent Unit costs in CP7

Figure 2: Key programmes in our R&D plan

41. The R&D programme is set out in Appendices B to E: The summary plan including project timings, programme methodology and leading indicators in Appendix B; spend profile in Appendix C; benefits and costs, discounted analysis, sensitivity analysis and assumptions in Appendix D; and initial business cases for each of 129 projects that make up the R&D programme in Appendix E.

42. The programme is balanced, providing a pipeline of improvements across our assets. Whilst in some cases these start to realise benefit during late CP6, the R&D projects are designed to output into business change and delivery programmes, such as Intelligent Infrastructure, that will be developed during CP6. These will drive a further step change in our efficiencies for renewals in CP7 and beyond.

43. The R&D programme has been developed taking into account deliverability and selects projects at all stages of readiness to ensure the output of the R&D plan has the best opportunity to be exploited. All R&D projects are assessed against a deliverability matrix with their benefits adjusted to reflect their current state of readiness. Benefits of projects will ramp up from initial deployments in late CP6. The spread by readiness is shown in the plan information at Appendix C.

44. The R&D plan includes key improvements to data accessibility, integration and knowledge at an industry level. The ease with which data can be shared is a critical enabler to achieve increased value from all other improvements and work packages.

Return on investment

45. R&D investment is critical to avoid an unsustainable future for the railway. Our asset sustainability modelling, for our SBP planning, identified that planned CP6 volumes were short of the 'volume' of renewals to maintain steady state sustainability. The models factor in measured benefits of past improvements in our management practices, designs and interventions but do not account for further benefits we plan to deliver from R&D. So investment is required in R&D (alongside investment in renewals) to achieve asset sustainability by building new capability. R&D creates new and better interventions such as faster cheaper renewals or delaying a renewal due to better prediction of residual service life, enabling us to achieve our goals more efficiently and effectively. R&D also enables us to achieve more efficient delivery of performance, safety, security, cost efficiency and growth.

46. In the SBP, our long-term models of renewals suggested a gap of approximately £2 billion between our proposed CP6 renewals expenditure and the levels of spend needed to achieve steady state condition.

47. The R&D improvements included in our revised R&D plan bridge an average of £0.5 billion per control period of this asset sustainability gap and so form a critical component of our strategy to manage asset sustainability primarily through improvements to the way we manage track, structures and earthworks.

48. The R&D contribution to maintaining asset sustainability, together with renewals, efficiencies and other contributions are shown in Figure 3 forming our long term plan for asset sustainability.

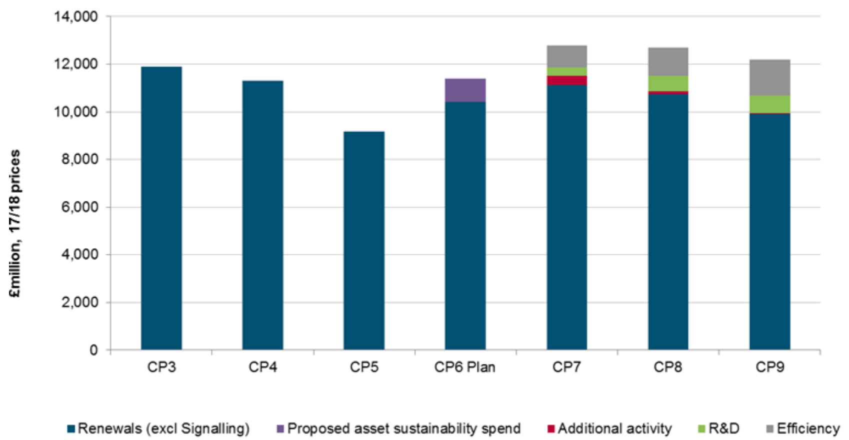


Figure 3: R&D is a critical part of maintaining efficient steady state asset management

49. Our plan to manage this gap comprises three parts:
    a. R&D improvements;

b. extra efficiencies to reduce the costs of servicing demand in subsequent control periods; and

c. a provision to cover gaps and undertake further renewals activity.

50. Route business plans for CP6 are dependent on baseline improvements that apply R&D from investment in CP5. This baseline includes current intervention policies and techniques and improvements planned under the Intelligent Infrastructure programme. The Intelligent Infrastructure programme aims to eliminate failures by making better informed and timely interventions – building on the CP5 'predict and prevent' approach and developing more strategic maintenance plans. Investment in R&D through our plan will both enable the current scope of the Intelligent Infrastructure capability and enable future scope to build on this already improved baseline.

51. The principal mechanisms that impact asset sustainability, and used in the asset sustainability model to forecast the impact of R&D on asset sustainability outputs, are:

a. Reducing the demand for interventions by:

- Extending the length of service from an aged asset
- Targeting intervention through a better understanding of risk
- Providing more reliable mitigation of in-service risk

b. Reducing the cost, and increasing productivity, of renewals and other interventions which means more activity to recover asset sustainability can be achieved within a given funding envelope and the delivery of interventions can be increased due to the reduced burden on possessions.

52. Figure 4 shows the combined impact of the R&D plan implemented through Intelligent Infrastructure to reduce the need for renewals for track, structures and earthworks. The values exclude wider benefits such as reductions in safety risk that arise from the reduced demand for renewals. The impact assumes R&D investment and investment to deploy through Intelligent Infrastructure type programmes continues in subsequent Control Period.

53. The forecast benefits to asset sustainability from R&D take into account past achievement for the likelihood of success and time to deployment which have been derived from previous R&D-enabled programmes at industry level. However, the enhanced governance and delivery approach in our plan is designed to significantly improve the pace at which we deliver to market. This will be achieved by:

a. accelerating supplier-driven industrialisation through the UK Rail Research and Innovation Network (UKRRIN) which pools and co-ordinates academic, industrial, train operator and infrastructure manager resources;

b. accelerating time to first deployment, increasing the likelihood of success and enhancing value through our Commercial Accelerator, established in 2018, to generate strong value propositions and accelerate the route to market; and

c. strengthening the connection of R&D into business change programmes such as Intelligent Infrastructure.

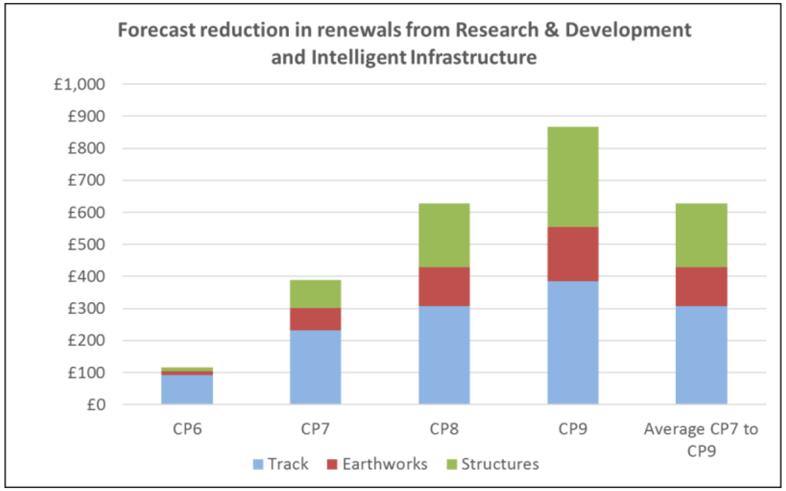


Figure 4: Forecast reduction in the need for renewals from R&D and Intelligent Infrastructure

54. However, the modelled benefits from R&D are likely to understate actual benefits.

a. They do not include benefits that will materialise as opportunities through better leverage of expertise of our technical experts. An example of this type of benefit from CP5 results from the development track bed knowledge and its publication as a "user guide to track stiffness". Around £2 million of research led by the University of Southampton enabled what has become the primary reference source for NR track engineers to improve the consistency and quality of engineering practice.

b. They do not include benefits enabled by the data-enabled railway programme in our Plan where Network Rail and wider industry capability is universally reliant on improvements to data accessibility, data integration and data knowledge.

c. Other related areas that we would expect to lead to benefits but which are not modelled for their impact include analytics, machine learning and artificial intelligence.

Robust assessment

55. Our plan has been re-scoped by assessing over 400 ideas gathered from cross-industry stakeholders before the February SBP. These ideas have been prioritised and rationalised down to 90 projects based on a qualitative assessment of benefits and gaps were identified. Further high priority projects were identified by chiefs of engineering, safety and security to close gaps and create the programme of 129 projects set out in Appendix E.

56. The programme benefits are adjusted taking into account their likelihood of success based on previous success rates and Rail Industry Readiness Level of maturity to provide a realistic view. After this adjustment the programme delivers an overall benefit cost ratio of 2.8.

57. To increase our confidence of this project-based view, in particular for the 55 per cent of R&D projects that deliver improved asset sustainability, we have also undertaken in parallel a top-down assessment that takes an asset management led view. This also comprises a judgement on impact and deployment phasing taken by Chief Engineers with the Head of Asset Management. This top down view includes estimated costs for deployment that are based on planned deployment costs for the Intelligent Infrastructure programme.

58. We have stress tested the programme under three scenarios: Benefits are 40 per cent less than the central value; projects on average take a year longer to reach deployment; and costs are controlled to budget but with reduced benefits due to projects under-performing and their deployment being delayed. In all three cases the programme delivers high value for money.

59. As stated earlier, our summary response to the Draft Determination includes an estimate of the asset management benefits from our proposed investment in R&D and Intelligent Infrastructure of £1.8 billion between CP6 and CP9. This estimate is conservative. The numbers in the scenarios, below, take account of the full R&D programme.

60. Scenario 1. If benefits were to reduce by 40 per cent, this would result from project under-performance. Our governance approach releases funding against our investment approval gateways and reviews progress against the readiness levels framework. These mechanisms would manage funding away from projects not meeting success criteria and we have therefore assumed thyatese 40 per cent reduction in benefits would be accompanied by a 20 per cent reduction in costs. The impact would see the NPV halve to £0.8 billion with benefit cost ratio of 2.1.

61. Scenario 2. If the delivery times were to be delayed across the programme by an average of a year, the impact would see the NPV reduce to £1.1 billion with benefit cost ratio of 2.2.

62. Scenario 3. If costs were to be controlled to budget and benefits reduced by 25 per cent to account for optimism on their value and time to deployment across the programme, the impact would see the NPV reduce to £1.0 billion with benefit cost ratio of 2.1.

63. Whilst we believe that the central values used in the assessment of value are robust as they apply actual historical performance of R&D, both the programme level risks driving these scenarios are actively mitigated under our plan. Tools and processes developed under our

Commercial Accelerator specifically target increased likelihood of success and reduced time to deployment compared to historical rates. This not only offers further confidence that the assumed level of success will be achieved, it underpins our expectation that the quoted benefits will be exceeded.

Proven record of value from R&D

64. We are confident about our ability to reduce levels of demand for future renewals by exploiting the outputs of R&D, as this is a continuation of our current track record for exploiting R&D benefits but with a step up in scale and pace.

65. Around £175 million benefit has been included in the baseline plans for CP6 as a result of R&D-enabled new capability developed in CP5 and which has not therefore not previously been available. This new capability has emerged from R&D that in some cases commenced before CP5 so, although we are accelerating the pace of progressing R&D, it is vital to maintain momentum with R&D during CP6 to avoid unreasonably constraining progress to continue to address asset sustainability in CP7.

66. Over the last 15 years, improvements enabled by R&D have led to us achieve dramatic changes to the reliability of our assets at reduced cost.

67. R&D-enabled improvements have led to us significantly improving asset reliability. Figure 5 shows the decline in service affecting failures for track with a 40 per cent reduction being achieved since the start of CP3. Over the same period a 70 per cent reduction has been achieved in the number of broken rails shown in Figure 6.

68. Figure 6 shows the time of introduction for each of five key R&D-enabled improvements to the way that we manage track:

    1. **Train based rail grinding** to manage the condition of rails
    2. **Train based ultrasonic testing** to identify flaws in rails
    3. **Rail Defect Management System** to bring together all data on rail condition in one recording system
    4. **Plain Line Pattern Recognition** for safe, consistent track monitoring.
    5. **ORBIS** (from the Offering Rail Better Information Services programme) **decision support tools** enabling engineers to exploit asset data to better target and plan interventions.

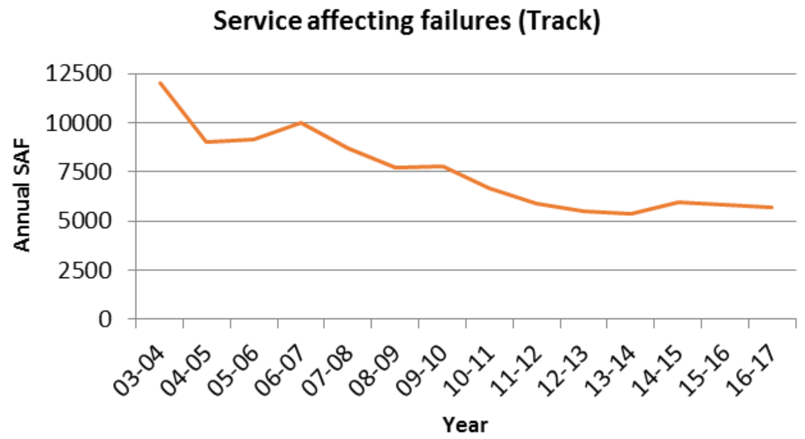


Figure 5: R&D-enabled improvements have reduced service affecting failures from track

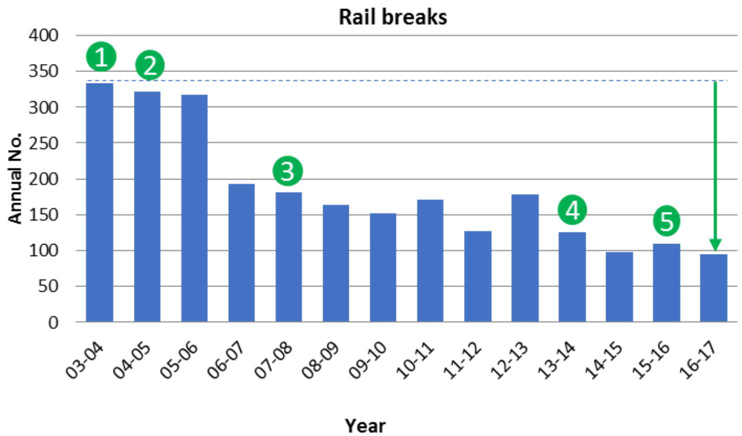


Figure 6: Interventions in track management enabled by R&D

69. The introduction of these and other R&D-enabled improvements has driven a reduction in the number of rail breaks by more than 70 per cent over the last 15 years.

70. Safe, consistent track monitoring through Plain Line Pattern Recognition and ORBIS decision support tools to better target interventions, two of the key R&D-enabled improvements, are included at Appendix F as case studies.

71. We have revised our asset policies as a result of improvements enabled by R&D. This has reduced the level of renewals investment required to achieve an improved performance position. The reduction in track renewals volumes is shown in Figure 7 including reductions in rail, sleepers and ballast renewals. We estimate the value of the avoided renewals equates to £1.5 billion over CP4 and CP5.

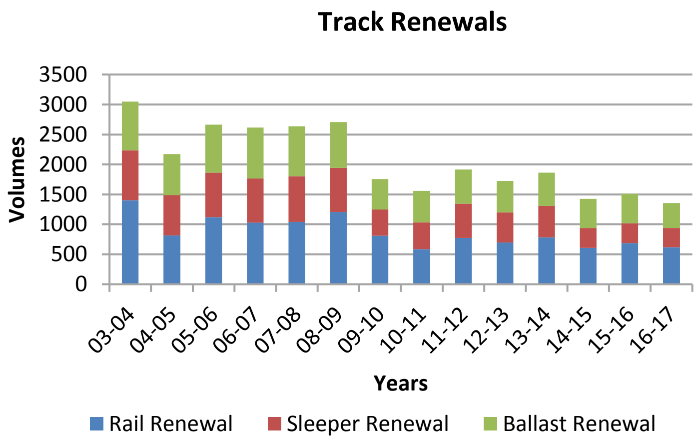


Figure 7: R&D-enabled improvements have reduced the volume of track renewals

Governance

72. Our governance arrangements for the re-worked plan are simpler, making it much clearer that the accountability for funding decisions sits with Network Rail. Governance for the R&D plan is summarised in Figure 8. A more detailed view of the governance process is provided at Appendix G.

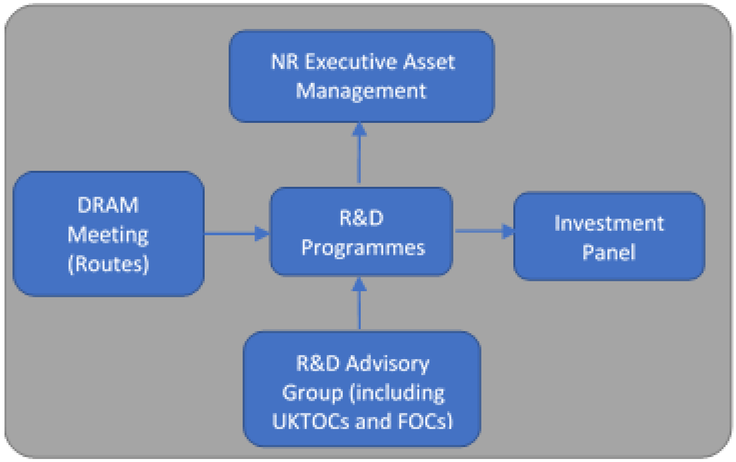


Figure 8: Governance for programmes under the R&D plan

73. All investment decisions across all programmes will be governed through well-established processes under our Investment Regulations and made by investment panel. A panel has been operating for Network Rail R&D investment through CP5 and includes wide representation from across Network Rail businesses including the routes. Deeper engagement with the routes will be achieved through the regular meetings of the Directors of Route Asset Management (DRAM).

74. Investment decisions take into account the views of industry through a new advisory group acting under the industry's Technical Leadership Group which sits under the Rail Delivery and Rail Supply Groups.

Accountability sits with the Group STE Director.

75. All investment decisions for R&D during CP5 have been supported with investment papers as required under the Investment Regulations and this will continue in CP6. To improve the quality of governance, several improvements have been introduced to reflect the different risks and issues with R&D investments compared to renewals and enhancements.

76. A clear and common validated understanding of the state of development for an R&D project is achieved through the Rail Industry Readiness Levels framework. This framework, developed in CP5 with industry and applying good practice from leading technology sectors including aerospace, is applied as a gated process. Projects self-assess their position against the framework and then submit this assessment, together with the evidence used to support the assessment, to our Product Development Framework (PDF) panel.

77. The PDF panel comprises expert members across all aspects of the readiness of R&D and drawn from across Network Rail including the routes. Projects are only able to secure funding for future stages once they have their status verified against the framework.

78. Governance includes a prioritisation approach across the plan that assesses strategic fit from a national perspective, strategic fit from a route perspective, return on investment and deliverability. This prioritisation approach has been applied in shadow running for our CP5 investment from 2017. It will continue to be applied to assess whether projects move in or out of the Plan.

    a. The national perspective aligns to network-wide long term asset stewardship and is provided by reference to the Group STE Strategic Plan, technology strategy and the road maps and published challenge statements across the Chief Engineer and Chief Quality, Heath, Safety and Environment Officer.

    b. The route perspective aligns to needs articulated in the route plans. Currently, route plans focus on initiatives where there is a high level of confidence that benefits can be realised. Because the R&D process is about de-risking solutions before they can be built into plans, and the first iteration of generating a suite of devolved plans focussed on building plans using known solutions, the exploitation of R&D is not currently visible in route plans. Under the 2018/19 round of business planning, STE is working with the routes to improve the line of sight to exploiting future benefits from R&D.

79. In addition to our business as usual governance outlined above, we recognise the importance of ensuring confidence with progress against the plan. We therefore propose to carry out a formal review of our progress in delivering the programme in early 2021. If the programme is not making adequate progress, we will revise our plans for the rest of CP6 and redeploy the funding into asset sustainability investment. We will engage with ORR and the industry during this review.

80. Equally, if we are delivering the programme successfully and there are further projects with a strong business case, we will consider investing further using the Group Portfolio Fund if financial risks have not materialised. We welcome ORR's support in the Draft Determination that this is an appropriate use of the Group Portfolio Fund.

Deliverability

81. We recognise that the level of investment in R&D proposed in our February plan for CP6 was considerably greater than the level managed in CP5. Although our revised Plan reduces the level of investment in R&D under the focussed prioritisation for the rail infrastructure, at £357 million including third party funding it is around 50 per cent greater than total R&D funds managed in CP5.

82. However, managed as a single consolidated programme, it is at a level where we have successfully delivered complex programmes to drive new capability that have themselves included elements of R&D and our revised Plan draws on our experience and established methodology.

83. Our Plan includes a detailed mobilisation plan and applies MSP4NR methodology which has been successfully applied to programmes in CP4 and CP5 including the ORBIS programme. Our mobilisation plan includes an appropriately resourced team, starts in advance of CP6 and reflects the need to continue to ramp-up our capability and

resources over CP6.

84. The outputs of the R&D Plan will be exploited through future stages of existing change programmes that embed new technical capability including the Intelligent Infrastructure programme, to reduce service affecting failures affordably through optimised interventions; and the Digital Railway programme to drive down the cost of signalling asset renewals and maintenance.

85. The outputs of the R&D Plan will also be exploited to support our 'open for business' commitment that followed the review by Professor Peter Hansford by de-risking the route to market for the supply chain to increase pace, inform a shift towards collaboratively developed standards and encourage supplier investment in the R&D plan.

86. Our Plan incorporates learning from CP5. Learning points in three major areas are set out if Figure 9 and how these have been built into our plan. Learning is being shared and put up for challenge with industry under the Technical Leadership Group sponsored by the Rail Delivery and Rail Supply Groups.

87. Our Plan includes a procurement strategy that utilises Innovation Partnerships to provide access to expertise and harness the scale of resources to deliver the programmes. It will also ensure we can readily procure the outputs of successful R&D to support cost-efficient deployment whilst enabling suppliers to commercialise their solutions.

88. Within the prioritised programmes and the baseline projects in our Plan, R&D projects will be governed to optimise local benefit to the route and their stakeholders, network-wide view of long term asset stewardship, return on investment and deliverability including deployment.

89. Route needs are reflected in the asset management, security, safety and other strategies and policies managed by Group STE. These needs are built into the network-wide long term asset stewardship challenges through our published challenge statements – 50 are now in the public domain via the supplier pages on our website. The challenge statements structure and in many cases quantify opportunities to improve asset.

90. However, the links in the first set of plans published February 2018 need strengthening to create transparent alignment to Route needs through the route plans. The strengthened planning process to support devolution and the move to an annual strategic planning cycle underpins that connection. Showing clear connection between route plans and R&D priorities is a major focus for improving the Network Rail plan as we move into generating the next iteration of the plan from September for publication early 2019.

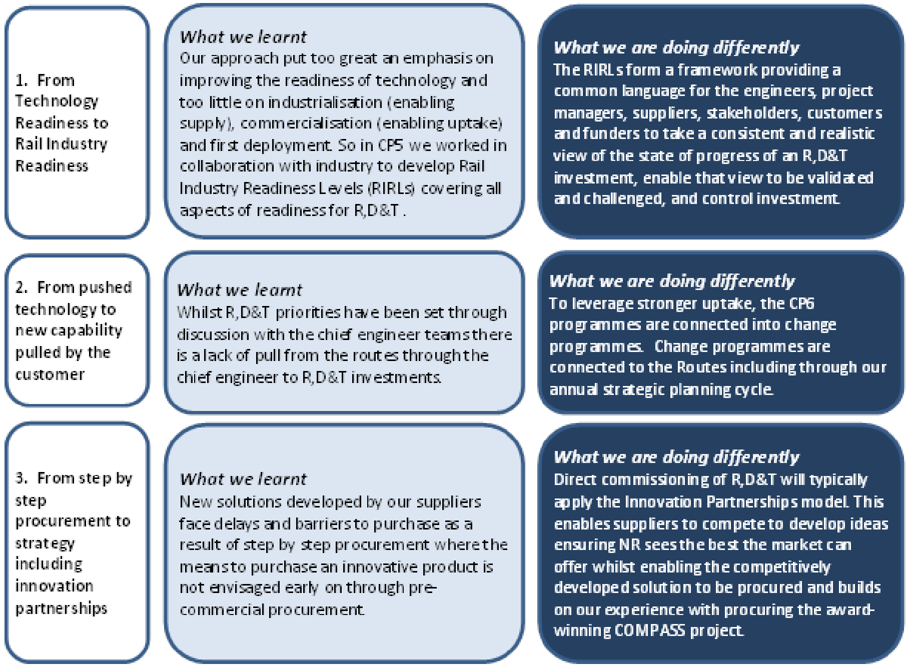


Figure 9: Key learning from CP5 applied to achieve high deliverability in CP6

Matched funding

91. In CP5 we secured £68 million of third party funding from suppliers, universities, European funding (in particular with the Shift2Rail programme) and through domestic grant bodies including Innovate UK and the Engineering and Physical Sciences Research Council.

92. Our plan for CP6 forecasts third party funding of £112 million. This is based on our experience from CP5 where we have built both relationships with a wide range of organisations and an understanding of the extent to which we can expect to succeed in securing collaborative partnerships and influencing R&D activity to meet our needs.

93. Our procurement strategy and strong connection to business improvement programmes, both of which create confidence for suppliers and other third party investors, have enabled us to initiate discussions about future partnerships and secure letters of support from tier 1 suppliers and other infrastructure managers covering the re-scoped plan.

94. Prospective collaborative funders have been identified and fitted to our projects and programmes. We have held discussions with a wide range of organisations including rail and non-rail infrastructure managers and suppliers.

95. The funding plan takes into account our confidence with securing funding and the level of influence we expect to be able to exert in aligning R&D activity to our needs. £112 million is net of these adjustments.

96. Our plan also includes a further R&D that we expect to offer some benefit to the business and whole railway system and delivered through opportunistic investment driven by others. Our baseline plan assumes this wider funding could amount to £22 million from UK public grant sources (eg the Engineering & Physical Sciences Research Council) and £223 million from industry and the EU (eg Shift2Rail).

97. This wider opportunity from R&D requires management to exploit. This is built into our assumptions for delivery.

Wider Government objectives

98. R&D investment extends well beyond enabling the direct impact of delivering better railway outcomes including asset sustainability. It directly contributes to economic growth by underpinning the growth of companies in the rail supply chain, supporting export opportunities and enabling the rail sector to compete domestically and globally in the future world where mobility will be offered as a service. This plan enables:

    a. The exploitation of £92 million committed investment in the UK Rail Research and Innovation Network (UKRRIN) with £28 million from Government (through BEIS) and matched with £64 million by industry.

    b. Network Rail to play its part in the rail Sector Deal being negotiated under the Government's Industrial Strategy, in particular to contribute to delivering a sustainable UK rail sector.

    c. A procurement strategy for R&D that supports the Government's growth agenda to secure the employment of apprentices and improve market access for SMEs.

    d. Success for the Government's plans to establish a rail accelerator network which is on track to formally launch for the start of CP6. Our R&D Plan includes a commercial accelerator that forms a critical part of the proposed network which aims to reduce barriers to market and open new market opportunities making bought products and services cheaper and increasing the likelihood of achieving self-financing, or partially self-financing, market opportunities. This contributes to Network Rail's 'open for business' commitment and the DfT's market-led proposals policy.

    e. Data to fulfil its role as a key enabler to delivering better value from the railway. The data-enabled railway programme builds on outputs from the ORBIS programme substantially delivered in CP5 and draws requirements from across all change programmes including the Intelligent Infrastructure programme. This key area of our Plan – as well as providing an essential enabler across our R&D Plan - provides an additional function in supporting the Government’s Joint Rail Data Action Plan which is otherwise unfunded.

f. R&D in data and telecoms to be developed as a significant contributor to enabling a cross-departmental government collaboration to make an economic case for the deployment of 5G technology.

Appendices

A: Scotland and the R&D plan

How will the R&D plan support Transport Scotland's aims?

1. The R&D plan focuses on issues that are important to the whole GB rail Network Rail that includes a critical contribution to achieving asset sustainability, increasing capacity and improving performance.
2. Specific issues that are included in the overall R&D programme which align to Transport Scotland's Key Strategic outcomes which we consider should be of interest are set out in Table A1.

How will the R&D plan support Scotland Route Business Plan?

3. The R&D plan underpins future delivery for many programmes in CP6 including:
    - Intelligent Infrastructure; and
    - the Home Safe Plan.
4. Specifically, the R&D plan will support Scotland route Activity by:
    - Improving asset performance including Earthworks, Drainage and Track;
    - Weather resilience in response to climate change;
    - Improving asset sustainability by better targeting renewals and reducing the cost of renewals;
    - Reducing Safety Risk through better fatigue management; and
    - Greater understanding of manual handling risk and increased workforce safety.

Strategic Outcome	Support delivered through the R&D plan
Improved services	Developing traffic management and improving timetabling techniques
Improved capacity	Improving the reliability of assets and introducing new technology that speeds up recovery from failure
Improved value	Improving the affordability of asset management. Getting more value from data by: • sharing data across organisations to reduce the cost of data collection • improving techniques to increase the usable gauge enabling larger stock to run on the existing infrastructure
More effective integration	Utilising passenger services to collect infrastructure data
Increasing inclusive economic growth	• Working with R&D expert centres across Scotland including Heriot Watt University, Strathclyde University and The Oil and Gas innovation technology centre • Work to decarbonise the railway and support a reduced reliance on diesel vehicles.

What work will we do in Scotland?

5. A large part the programme is designed to deliver trials and support 'first in class' deployment of new technology and we anticipate demonstrations and first in class deployments, in particular in the areas of earthworks and drainage, to be undertaken in Scotland.
6. One of the mechanisms we will use to deliver the R&D plan is the UK Rail Research and Innovation Network (UKRRIN). UKRRIN is the centre of excellence model that has been established in the Rail sector to deliver R&D through a partnership between operators, infrastructure managers, suppliers and academia. UKRRIN includes Heriot Watt university who we have already been heavily working with in CP5, we will also work with universities that have expertise in specific areas such as Strathclyde who have undertaken research on the impact of scour to submerged bridge foundations in CP5.
7. We are in discussions with The Oil and Gas Innovation technology centre based in Aberdeen about how we can collaborate across our programmes and share our expertise.
8. Transport for Scotland participated in our recent work to facilitate market-led solutions to the reduction of diesel trains on the network. This work is at an early stage but is a pathfinder for a key feature of our plan where, under our Open for Business policy, we facilitate market-led solutions to bring new technology faster on to the railway.

How will we involve Scotland in governance of the R&D plan?

9. We are keen to make sure all funders, customers and stakeholders are involved in the decision making of the R&D programme. We are proposing a new Industry R&D advisory board including the DfT Scientific Officer and other Industry R&D experts. Transport Scotland will be invited to join this Board. A terms of reference will be drafted over the forthcoming weeks.
10. In addition, representatives from Scotland Route attend the National Asset Management strategy meetings and asset review meetings where the R&D programme is presented and discussed.

B: Programme summary plan, programme methodology and leading indicators

See separate document

C: Programme spend profile

See separate document

D: Benefits, discounted analysis, sensitivity analysis and assumptions

See separate document

E: Initial business cases

See separate document

F: Case studies

6 key case studies

- Plain Line Pattern Recognition
- Degraded Mode Working System (COMPASS)
- Enhanced Condition Points Monitoring
- Battery operated train (IPEMU)
- Rail grinding
- ORBIS – decision support tool

Case study	What and why	How and where	Impact and benefit	Learning and next steps
Plain Line Pattern Recognition	Captures high resolution images to generate condition data for rails, reducing possessions and targeting interventions	Implemented nationally through the measurement train fleet	A net benefit of over £4 million in CP5. A major contributor to the elimination of broken rails and reduced trackside inspection	Artificial Intelligence to automate examination of irregularities
Degraded Mode Working System (COMPASS)	Solution to restore capacity during signalling system failure. £130 million of disruption occurs annually as a result of signalling system failures.	Proof of concept at this stage. Potential for national deployment.	Potential impact on delays under review. Demonstrated new approach to procuring R&D in rail, providing a pathfinder for our business as usual approach in CP6.	Award-winning project with a novel pre-commercial procurement approach. Create the full business case for implementation.
Enhanced Condition Points Monitoring	Detects, diagnoses and predicts failures earlier on points machines to reduce failure rate and enable better, less disruptive planning of maintenance.	Data analytics used for prediction, achieved with the University of Birmingham. Piloted in 3 locations currently.	Benefits achievable in 2016/17, if this capability had been available, are a saving of around 75,000 delay minutes.	National implementation following pilots. Establish wider benefit streams such as automated works scheduling.
Battery operated train (IPEMU)	Integrates battery traction power technology on an electric train. Demonstrated in-service and used to inform a generic business case.	Demonstrated in the Anglia franchise following analysis and bench testing options.	Enabling affordable decarbonisation. Outperformed assumptions and triggered interest as viable solution.	Inspired opportunities through franchising but slow pace of uptake. Work underway to stimulate market-led implementation.
Rail grinding	Faster, safer treatment process to remove defects and restore the condition of rails. Used with automated inspection techniques to create an efficient find and fix system.	Implemented nationally through specialist equipment. Long term development including high productivity.	Major contributor to reduction in broken rails and service affecting track failures. Latest technology commercialised by Route Services in 2018.	PhD funded at the University of Sheffield to further advance high speed capability.
ORBIS – decision support tool	Integrated view of asset data for better renewals decision making enabling asset information to be exploited.	Decision support covers track, level crossings, signalling and operational property – nationally.	Substantial avoidance of asset intervention – eg £13.9 million activity removed from Wessex work bank.	Build integration with the Intelligent Infrastructure programme to move from find and fix to predict and prevent.

Case study – Safe, consistent track monitoring through Plain Line Pattern Recognition (PLPR)

What have we done?
PLPR is a train borne high speed video inspection system using laser technology by capturing images every 0.8mm at up to 125mph in plain line continuous welded rail. Potential track defects are identified by PLPR and then reviewed by examination inspectors.


Why have we done it?
PLPR replaces most of the basic visual inspection done through track walking. It is consistent, repeatable, reliable and efficient inspecting whilst the track is under load. It reduces our staff exposure to hazards.

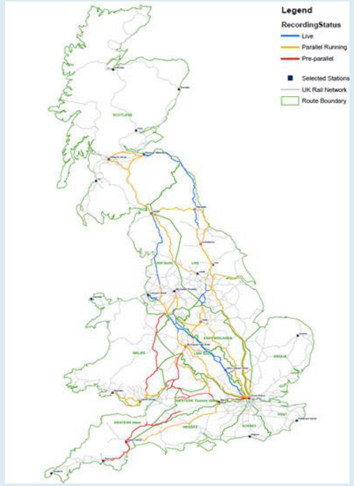

What is the impact and benefit?
The net monetised benefit expected to be realised in CP5 is £4.1 million with £0.8 million realised to date. Of greater significance, however, is the enhanced quality and consistency of track condition data which underpins safety and wider asset decision-making

What have we learned?
PLPR succeeded in realising benefits from an ambitious technology application showing that a complex set of inspections can be automated. We learned that work-arounds to facilitate the project can all too easily become embedded in BAU – informing our move from technology readiness to industry readiness.

What next – how will we build on it?
Refine the algorithms to reduce the number of false positives. Teach the system to learn from the examination inspectors to increase the level of automation.

Our supplier:** "We were successful on a number of Innovate UK funding calls…. to develop new and innovative products…. We have enabled Network Rail to automate basic visual inspection." **Stirling Kimkeran, Head of Technology and Development Solutions, Omnicom Balfour Beatty

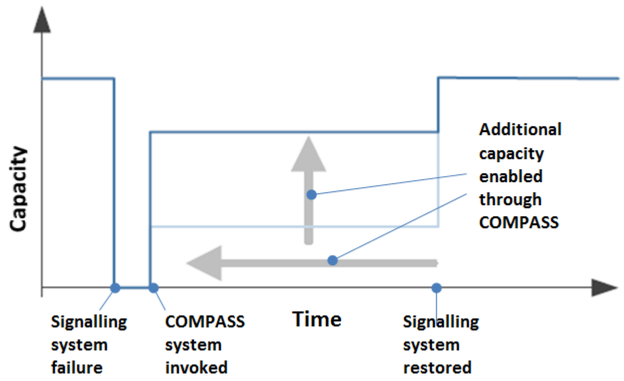
Where have we exploited it?
14,000 miles of track across all 8 routes.



End user:** PLPR saves costs in terms of overtime payments and vehicles and the system also helps the team make better use of its time. As well as a picture, the technology gives us an accurate GPS location for each suspected fault so a crew can easily find the site and we avoid problems of double reporting. **Stuart Evans, Track Section Manager

Case study – Degraded Mode Working System (COMPASS)

What have we done?
Developed an innovative solution – COMPASS - to restore capacity after signalling system failure using off-the-shelf components. It is activated remotely and can be implemented within minutes. It was achieved through an innovative collaboration.



Why have we done it?
Failures in the signalling system lead to substantial delays for passengers and knock-on disruption as train services struggle to recover. NR currently makes over £130 million per annum of compensation payments.

What is the impact and benefit?
Helping train operators restore services after signalling system failure by reducing the loss of train paths. Less compensation and negative reputational impact for the railway industry.

What have we learned so far?
A demonstration showed the potential to integrate with current systems including existing driver displays. The novel procurement approach delivered innovation but could be improved to achieve an uninterrupted route to market by applying the new innovation partnerships model.

Supplier, Altran, say: "We are proud to have applied our global cross-sectoral digital and engineering expertise to solve a major issue for the UK railway, enabled by innovative and collaborative procurement."

Awards

The project won the Engineering and Safety Railway Industry Innovation Award 2018.

Where do we plan to exploit it?
COMPASS has been demonstrated as a working concept. It has the potential to provide resilience across the network – however, the business case is under development.

What next – how will we build on it?
COMPASS can now proceed to full specification and deployment in service. We are reviewing the opportunity to commercialise the delivery model

Case study – Enhanced Condition Points Monitoring (eCPM)

What have we done?
eCPM is a software tool designed as part of NR's predict and prevent strategy and increases NR's ability to detect, diagnose and predict potential failures earlier on points machines that are monitored as part of NR's strategic Intelligent Infrastructure programme. eCPM is NR's first predict and prevent tool for infrastructure monitoring on the operational railway.

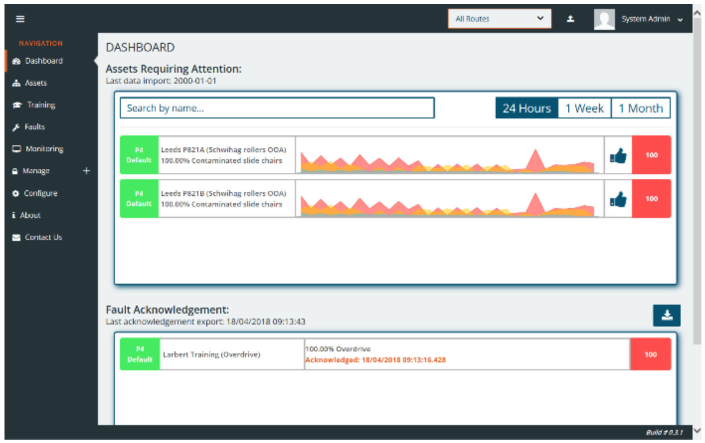
What is the impact and benefit?
Benefits achievable in 2016/17, if this capability had been available, would be a saving of around 75,000 delay minutes.

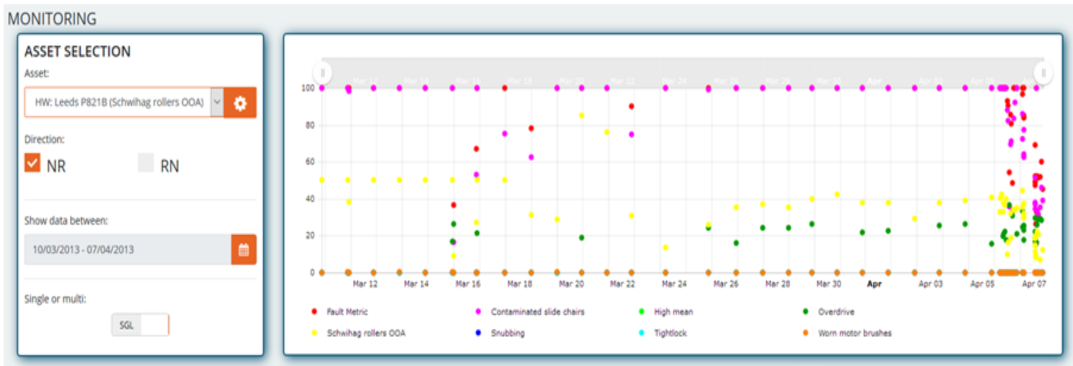
Why have we done it?
Earlier detection of anomalies means that assets can be monitored in a more proactive manner which in turn leads to less reactive interventions being required.

What have we learned?
The project developed a complex set of algorithms for the eCPM system, these provide the underpinning science for diagnosis and prognosis enabling earlier detection of potential service affecting failures that impact performance of point machines.

Where have we exploited it?
Piloted in 3 locations currently to detect, diagnoses and predicts failures earlier on points machines to reduce failure rate and enable better, less disruptive planning of maintenance.

What next – how will we build on it?
National implementation in CP6 following pilots. Establish wider benefit streams such as automated works scheduling.

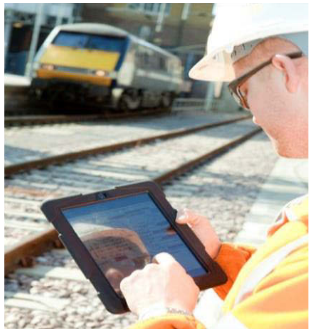




Case study – ORBIS – Decision Support Tools (DSTs)

What have we done?
DSTs have been developed for track, signalling, electrical power, operational property, level crossings and switches and crossings – transforming maintenance and renewal decisions across the network.

Why have we done it?
This suite of DSTs gives engineers and planners access to up-to-date, aligned asset data to support informed, evidence-based decisions on the optimal time to carry out interventions for maximum impact.



What is the impact and benefit?
Track and E&P teams can access the information they need, when they need it.
Data within the DSTs allows engineers to better understand degradation rates and provides evidence to carry out timely and cost-effective interventions.

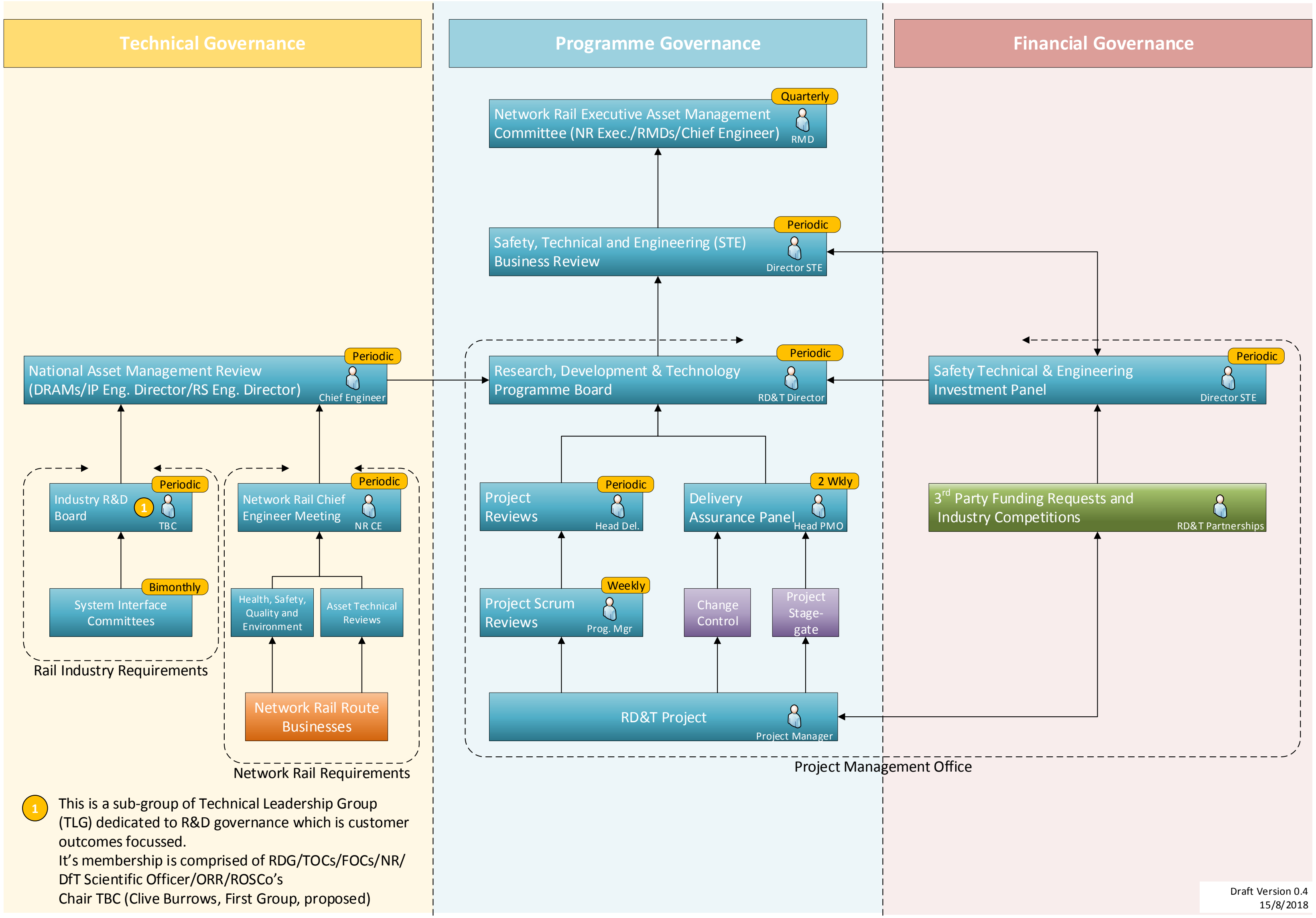
End user:
"The benefits are huge: I'd estimate we were treating just 50-75 per cent of the correct track areas – now I'm confident it's closer to 100 per cent. I'm now able to direct tamping machines to the exact fraction of an eighth of track that needs work.
"This is without doubt the greatest development I've seen for displaying asset data."
Steve Kingston, TME, Wales

"Accessing track and OLE data in one place will improve safety – it means less time for teams on track surveying height staggers when the NMT triggers OLE exceedances.
Kevin Marshall, senior asset engineer, Anglia

Where have we exploited it?
The DSTs have been deployed National as part of the ORBIS Programme.

What next – how will we build on it?
Build integration with the Intelligent Infrastructure programme to move from find and fix to predict and prevent Aligning data from 12 different data sources simplifies the task of gathering information on linear assets and delivers capability to drill down into data to understand and treat the root cause of faults.

G: Governance process



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Network Rail’s response to ORR’s Draft Determination:

Asset sustainability and trade-offs with R&D

31 August 2018

Executive Summary

The key points we make in this document are:

- ORR does not think that the level of renewals expenditure forecast in the SBP is sufficient to keep our assets in a sustainable state.
- ORR has formed this view because:
  - modelling by our Safety, Technical and Engineering (STE) team suggested that a minimum additional £400m spend, above the levels proposed in the SBP, to maintain our assets sustainably; and
  - our measure of asset sustainability (Composite Sustainability Indicator - CSi) was forecast to decline over CP6 in our SBP.
- To address its concerns, ORR's Draft Determination proposed that we spend an additional £1bn on renewals that improve asset sustainability.
- We have carefully considered ORR's concerns and have developed a proposal to address them.
- ORR has placed reliance on our renewals expenditure models and CSi measures. However, in our SBP we were not clear enough that our models are static. This is because they do not take account of the following factors:
  - efficiency improvements that are expected to occur in the second half of CP6;
  - the Draft Determination stretch efficiency challenge;
  - efficiency improvements expected to occur in CP7 and later control periods; and
  - benefits of research and development.
- We quantify these factors and note how investment in R&D provides significantly better value for money than traditional asset spend.
- The adjustments to our models inform how we have responded to ORR's concerns about asset sustainability.
- We conclude that we agree with ORR that we do need to spend more on asset sustainability in CP6. Our analysis suggests that we will be able to address ORR's concerns by spending an additional £538m on renewals, provided that we are also funded for £245m of investment in R&D.

Context

ORR is rightly concerned that renewals expenditure in the SBP does not appear to be sufficient to maintain asset sustainability in England & Wales. Its concern is informed by both the assurance review carried out by our Safety, Technical and Engineering (STE) team and our long-term modelling of renewals expenditure and asset sustainability. It has therefore proposed that Network Rail should increase its investment in improving asset sustainability in England & Wales by around £1 billion. This would be funded by reduced R&D expenditure and increased efficiency savings.

We note that the net savings identified by ORR totalled £959 million. As ORR also proposed additional investment in safety improvements and the creation of a Performance Innovation Fund, ORR's Draft Determination would provide additional funding of £870 million to invest in asset sustainability.

We agree that there should be additional investment in asset sustainability. In July, we provided ORR with details of the potential projects that would be delivered if funding of around £1 billion were available for asset sustainability investment, as proposed in the Draft Determination. Since then we have reviewed the rationale for this and have now developed an alternative proposal for the additional investment to total £538 million. This also needs to cover the further Schedule 4 costs.

Long-term modelling

This proposal is informed by a review of our long-term modelling of future renewals expenditure. Our long-term models suggest that the CP6 renewals expenditure in the SBP is around £2 billion less than the long-term average for subsequent control periods. However, they do not produce precise forecasts of future renewals or asset condition.

We have concluded that our long term-models are static as they are based on the application of today's policies and technologies. They do not include efficiency and asset management benefits from future R&D investment and continuous improvement.

We know from past experience that new technology will improve asset management practices. For example, we have achieved a reduction of five per cent in the required level of track work as a result of improvements since the start of CP5. Technology will also improve our asset condition knowledge and enable us to target maintenance and renewals more accurately, particularly for earthworks.

We have also made significant improvements in our asset management capability, which has been independently measured using the Asset Management Excellence Model. This increases confidence in our ability to deliver further benefits from our R&D programme, delivering sustainable benefits in long-run renewals.

We estimate that investment in R&D during CP6, together with deployment of our Intelligent Infrastructure programme and continuous improvement in our asset management, will deliver benefits of £1.8 billion over the subsequent 15 years.

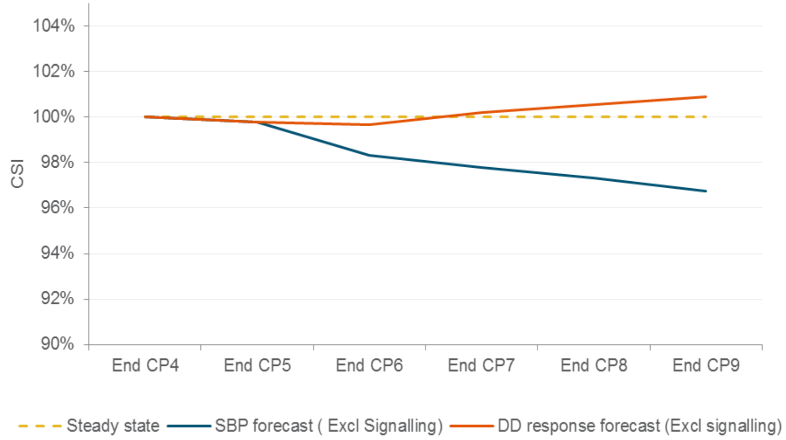
The models also do not include future efficiency savings. The models do not include the full effect of CP6 savings (£600 million) nor any savings beyond CP6. We have assumed additional savings of £300 million in subsequent control periods. While there is clearly considerable uncertainty forecasting efficiency beyond CP6, we consider our estimate of savings beyond CP7 is conservative.

These adjustments reduce average long run renewals on our core assets (excluding signalling) from £12.4 billion to £10.9 billion per control period.

Our analysis excludes signalling renewals. There is a significant bow wave of renewals in the next few control periods as signalling systems become life expired. Renewing on a like-for-like basis will require additional funding and present huge deliverability challenges. We are therefore developing our plans for the Digital Railway. We expect to be able to reduce significantly the cost of ETCS technology, potentially by 30 per cent. This will enable us to develop an affordable, deliverable programme for replacing signalling systems. The programme includes whole-industry costs as there needs to be full integration between rolling stock and infrastructure. We are also exploring the potential for third party funding. The long-term costs of signalling renewals therefore need to be considered separately.

ORR is rightly concerned about the decline in the Composite Sustainability Index during CP6 and beyond. Like our long-term renewals modelling, this presents a conservative view as the models do not include future improvements in asset management, through R&D and continuous improvement, which will result in increases in average asset lives.

Including this effect will therefore improve the CSI forecast. The impact of these changes is shown below.



In addition, the benefits to the Composite Sustainability Measure of increased investment during CP6 are not significant and there would only be a small, one-off reduction in future control period renewals. Whereas investing in R&D provides the opportunity for larger, recurring benefits that will continue reducing long-term renewals costs.

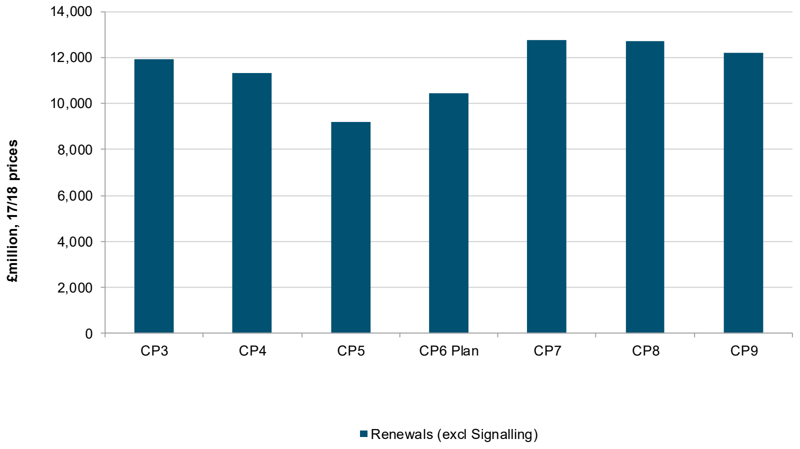
Further investment in asset sustainability

Average long run renewals of £10.9 billion per control period are still somewhat higher than the SBP core renewals of £10.4 billion. We therefore agree that there should be an increase in asset sustainability investment.

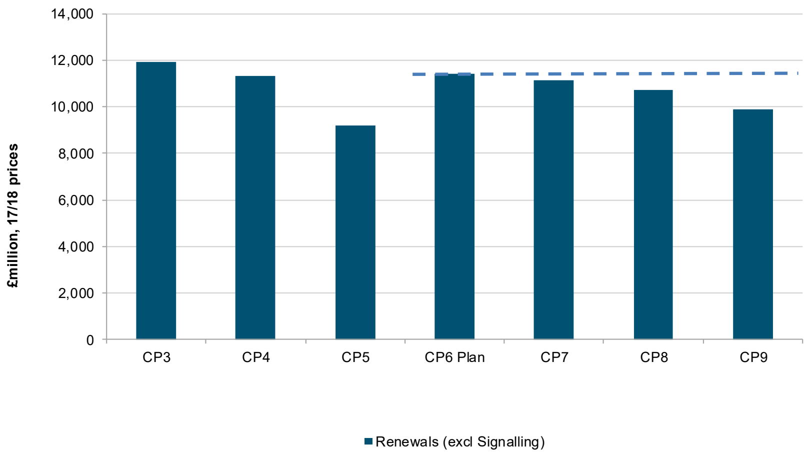
In considering the scale of the increase, it is important to recognise that renewals expenditure does not reflect all asset management activity during CP6. We will also upgrade our assets as part of enhancement programmes that are being separately funded. On the Transpennine upgrade alone we expect to invest around £250 million in our track and earthworks assets. Potential reactive expenditure on earthworks of £188 million will be separately funded through the Group Portfolio Fund or insurance (as it is not possible to predict where it will be needed).

We therefore consider that our proposal for additional asset investment of £538 million achieves sustainable asset management in CP6. This is illustrated by the charts below.

SBP long-term renewals



Updated long-term renewals increase



Our proposal takes into account the results of STE's assurance review of the SBP which identified that a further £400 million investment in asset sustainability would be desirable in CP6. Consistent with the recommendation in this review, our proposal includes specific activity totalling £212 million. This principally relates to track and earthworks with the main increases being in the Wessex, LNW and LNE routes.

We propose increasing asset sustainability investment by a further £326 million (resulting in a total increase of £538 million), with allocation to routes being based on a similar approach to our SBP. The approach has been reviewed with the Directors of Route Asset Management for each route with overall assurance by STE. We are currently updating the specific list of investments and the associated Schedule 4 costs (likely to be around £60 million). We will provide more specific detail and the impact on the Composite Sustainability Index to ORR in September

Detailed response

1. Purpose

This document sets out the basis for our revised proposals to address ORR's concerns about the impact of our SBP on the long-term asset sustainability of our infrastructure.

2. ORR's Draft Determination proposals

ORR does not consider that the level of renewals expenditure forecast in our SBP is sufficient to keep our assets in a sustainable state. ORR has formed this view because:

a) modelling by our Safety, Technical and Engineering (STE) team suggested that an additional £400m spend, above the levels proposed in the SBP, to maintain our assets sustainably; and

b) our measure of asset sustainability (Composite Sustainability Indicator - CSi), is forecast to decline over CP6.

3. Adjustments to the renewals expenditure modelling

Our SBP submission on renewals was informed by a review of our long-term modelling of renewals expenditure. ORR has placed great reliance on these models, and this has significantly contributed to ORR's Draft Determination suggestion to increase our renewals expenditure by £1bn for CP6. However, in our SBP we did not explain clearly enough that these models are quite static and exclude several important factors. We have therefore made adjustments to our original models to account for these, the effects of which are shown in Table 3.1 below. In summary, the adjustments are as follows:

a) CP6 exit level efficiency – we previously applied a forecast of mid-CP6 efficiency. We have amended our forecast to use the overall (exit-to-exit) CP6 efficiency.

b) Draft Determination stretch efficiency (portion of £491m attributable to renewals) – we have taken account of the ongoing efficiency associated with renewals spend (i.e. £400m per control period), from the additional efficiency we have included in our response to the Draft Determination.

c) Estimate of equivalent efficiency (at equivalent CP6 achievement) - our forecasts omitted efficiency savings we expect to deliver in future control periods, which reduces the long-run renewals forecast.

d) Improvements (Intelligent Infrastructure and R&D) – we have adjusted our forecasts to now include the expected benefits resulting from our Intelligent Infrastructure and R&D programmes.

e) Benefit of extra work that we have now committed to carry out in CP6 which is now not required in CP7, 8 and 9 – we have increased renewals spend in CP6 by £538m. We have therefore adjusted our forecasts to remove this expenditure from future control periods, when it would otherwise have been spent.

<u>R&D 'multiplier effect'</u>

ORR has expressed concerns that our SBP included too much spend on R&D, at the expense of 'conventional' renewals activity. ORR proposed shifting £340m of R&D spend to renewals to help address its aim of improving asset sustainability.

Our evidence suggests that for every £1 spent on R&D, there is a return when we deploy the improved technology of at least £3, primarily from avoided future renewals (on a net present value basis - NPV). This is as a result of developing new ways of managing our infrastructure. We describe the benefits of investing in R&D in more detail in our revised CP6 R&D proposals response document.

<u>Adjustments for CP6 activity</u>

We have also made adjustments to our forecasts for CP6 activity which was not included previously. The impact of these adjustments is also shown in Table 3.1, and is summarised below:

a) Enhancement activity 'extras' – investment elsewhere in our SBP will fund the renewal of some assets. For example, the Transpennine Upgrade work will include £250m worth of track and earthwork renewals in CP6. We have accounted for this by increasing the renewals expenditure in CP6 in the table below. There is likely to be a much greater level of asset renewal funded by enhancements in CP6.

b) Insurance – we have provisions in our CP6 plan, through insurance arrangements, to address reconstruction activity for assets that fail due to extreme weather. We have assessed that these arrangements would likely amount to £188m worth of additional activity over CP6, and have increased our renewals expenditure to reflect this in the table below.

c) Additional renewals spend – we agree with ORR that we need to spend more on asset sustainability in CP6 than we included in our SBP. However, our analysis suggests that we will be able to address ORR's concerns by spending an additional £538m on asset sustainability (rather than £1bn as ORR proposed), provided that we also spend an additional £145m on R&D. We have accounted for this additional £538m in our updated forecasts.

The full impact of all of these adjustments is set out in Table 3.1, below, and excludes signalling renewals. The accompanying spreadsheet "Asset Sustainability Summary Table" provides further detail and evidence for this analysis.

Table 3.1: SBP vs. DD response proposals

	CP6	CP7	CP8	CP9
SBP steady state renewals (modelled) – excluding signalling		**12.776**	**12.699**	**12.197**
CP6 exit level efficiency		-0.185	-0.185	-0.185
DD Stretch efficiency (portion of £491m attributable to renewals)		-0.400	-0.400	-0.400
Estimate of equivalent efficiency (at equivalent CP6 achievement)		-0.300	-0.600	-0.900
Improvements (Intelligent Infrastructure and R&D)		-0.350	-0.638	-0.750
Benefit of extra work carried out in CP6 now not required in CP7,8 and 9		-0.400	-0.100	-0.040
Total adjustments (exc. CP7 efficiencies) Average level of insurance additions		**-1.635**	**-1.923**	**-2.275**
Revised Long Term Steady State Run Rate Total adjustments (exc. CP7 efficiencies)		**11.365**	**10.777**	**9.925**
CP6 intended activity (renewals and other sources)				
SBP renewals (excluding signalling)	**10.430**			
Enhancement activity 'extras' (TPE) SBP renewals (excluding signalling)	0.250			
Insurance	0.188			
Additional renewals spend in DD response	0.538			
Sub total adjustments	**0.976**			
Revised CP6 Plan	**11.406**	**11.406**	**11.406**	**11.406**
Difference between future stead state renewals and CP6 intended activity		**0.041**	**0.629**	**1.481**

Note: the source of each of the figures presented in this table is set out in the accompanying spreadsheet "Asset Sustainability Summary Table".

4. Composite Sustainability Index

The adjustments we discuss in section 3, above, also impact on our measure of asset sustainability. We measure this through separate models for each asset class. These forecast changes in condition as an indicator of remaining service life. The results of the models are consolidated into a single composite sustainability index (CSi). The assets contribute to CSi in proportion to their relative scale, based upon depreciated replacement costs and rates of change within each asset class.

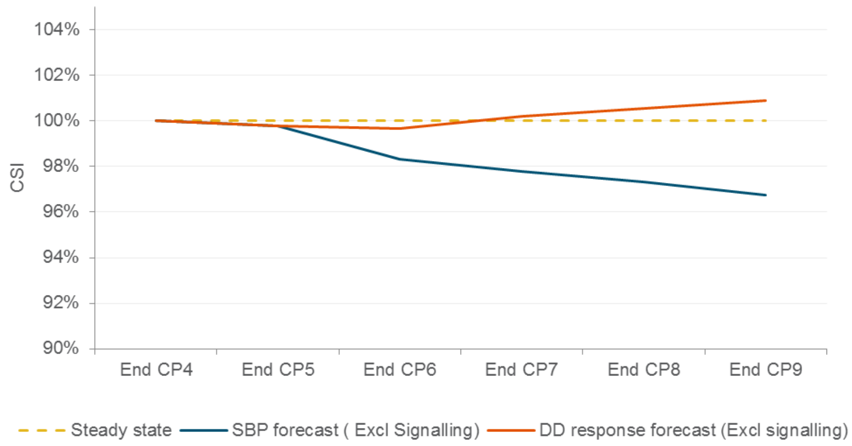
ORR is concerned about the decline in the forecast of asset sustainability (CSi) during CP6 and beyond, included in our SBP, which was suggested by our SBP modelling. Our CSi modelling is based, largely, on the same inputs as our modelling of long-run renewals. Therefore, our SBP position on asset sustainability also suffers from the same static assumptions and the adjustments described above therefore also apply to CSi. Table 4.1 shows the revised CSi.

As can be seen in the table below, the adjustments that we make, as described above, mean that the CSi measure remains stable over the long-run. Indeed, by the end of CP9 it improves by more than 1% (compared to end CP5 levels).

Table 4.1: Revised Composite Sustainability Index

	End CP4	End CP5	End CP6	End CP7	End CP8	End CP9
SBP forecast (excluding signalling)	100%	99.78%	98.32%	97.79%	97.34%	96.76%
DD response forecast (excluding signalling)	100%	99.78%	99.65%	100.22%	100.56%	100.91%

Figure 4.1: Revised Composite Sustainability Index



Appendix A: Explanation of CSi

We have developed models that consider the long-term volume, expenditure and output forecasts for each asset type. These are drawn from the best possible analytic methods, including network wide whole lifecycle models. The maturity of the modelling approaches varies by asset class and have been subject to several historical improvements as we learn and develop our understanding. We seek consideration of the 'material' influence that asset life has on performance risk, how the baseline varies by route and how the Asset Capability varies with changing state (e.g. used life or age).

The baseline seeks to retain current asset value and outputs

The CP6 baseline forecast is derived in each model to maintain 'Performance' and 'Risk' levels sustainably over the long-term, at lowest whole life cost for each asset. This seeks to retain 'asset value'.

These models are at different stages of maturity, in terms of:

- the sophistication of the degradation and intervention models;
- data quality;
- replication of intervention policies as applied on the ground;
- costs;
- linking to failures and risks; and
- validation.

A full description of each Tier 1 model has been provided to ORR as part of the supplementary SBP documentation, which describes the current status of the models, and discusses the outputs in detail.

Results are produced separately for each asset because each asset type has markedly differing lives and some are replaced as an entire system. For example, telecoms assets function for around twenty years and large parts are wholesale replaced within a single control period whereas structures function for several hundred years and tend to be subject to more steady state investment.

The current position by Asset Class is shown in Table A.1, below.

Table A.1: The basis of modelling by each asset and how this varies across asset.

Basis of Modelling	Asset Type (% of CP6 plan)	Notes
Assets modelled by asset life and activity volume	Signalling (33%) Track (28%) Telecoms (5%) **Total 66%**	Asset information is captured frequently and / or is assessed against asset life Common asset form and multiple cycles of re-measurement have allowed verified asset life modelling
Assets modelled by activity volume	Earthworks (5%) Bridges (8%) Tunnels (2%) **Total 15%**	Assets are heterogeneous in nature (of multiple differing asset forms) but are numerous enough by common type to be grouped into meaningful 'families' Multiple cycles of re-measurement are available from which models can be verified
Assets modelled by spend	Ops Property (6%) E and P (7%) Drainage (3%) Retaining walls / Culverts (3%) **Total 19%**	Assets are generally heterogeneous in nature (of multiple differing asset forms) but E&P aside are difficult to group into meaningful families We have limited repeat cycles of accurate measurement reducing our ability to verify model accuracy at this time

Our approach to developing the lifecycle modelling outlined above has previously been tested by independent reporters and through our own benchmarking work. The modelling we apply has been found to be good practice.

We aggregate each asset result into an overall 'Composite' indicator. To do this we take into account the rate of degradation and change in asset remaining life within each asset class. The asset lives and replacement values vary markedly across our asset classes. For example our structures portfolio has a replacement cost estimated at £280bn, whereas electrification assets are valued around £20bn. Small changes in relative proportions across the asset can change as for example enhancements alters the mix of assets deployed.

The baseline asset-by-asset plan for CP6 together with required long run average levels of investment are shown in the table A.2, below.

Table A.2: Proposed investment in CP6 and Long Run Average levels of activity

National	CP6 submission	Long Run	CP6 Gap
Track	3,774	4,609	**835**
Level Crossings	616	477	-140
Operational property	927	945	18
Telecoms	700	866	165
Structures	1,965	2,086	120
Earthworks	713	1,151	**438**
Electrical Power	1,129	1,349	219
Off-track	259	378	119
Drainage	349	481	132
All assets	**10,430**	**12,340**	**1,900**

Note: n*umbers exclude signalling as this is considered separately as it is dependent upon the deployment of the Digital Railway programme.*

Network Rail's response to ORR's Draft Determination: £80 million safety improvements

31 August 2018

Executive Summary

The purpose of this document is to respond to ORR's Draft Determination challenge that £80 million of schemes relating to level crossings and depot safety improvements should be moved from optional expenditure to core expenditure within our CP6 plan.

We have reviewed the targeted adjustments that ORR proposed in its Draft Determination and agree with the changes. They will be included in our CP6 plans and we have developed programmes of work for the changes to be taken forward.

The changes that comprise the £80 million expenditure challenge are:

- Moving £22 million of optional expenditure in the Freight & National Passenger Operator's (FNPO) CP6 plan into 'core' spend which will be used for safety improvements, including walking routes;
- Moving £25 million and £8 million of optional expenditure in the respective LNW and Wales route plans to core expenditure for level crossing improvements;
- Allocating £25 million for upgrading user-worked crossings with telephones in long sections to overlay warning systems, which has been prioritised based on risks.

We have responded separately to ORR's Draft Determination conclusions on asset sustainability which includes specific proposals to mitigate safety risks for earthworks, drainage and structures on the relevant parts of the network.

The route allocation of the £80 million expenditure is set out in the table, below.

£m	Depots (£m)	Level crossings (£m)	User worked crossings (£m)	Total (£m)
Anglia			9	9
LNE			5	5
LNW		25		25
South East			4	4
Scotland			1	1
Wessex			2	2
Western			4	4
Wales		8		8
FNPO	22			22
Total	**22**	**33**	**25**	**80**

Detailed Response

FNPO Safety Improvement Programme

The Freight & National Passenger Operator's (FNPO) CP6 strategic plan included optional expenditure of £22 million for its Freight Safety Improvement Programme (FSIP). FSIP includes various schemes which will improve site conditions and promote safe operations at sites used by freight and national passenger operators.

We agree with ORR's Draft Determination conclusion that these schemes should be moved from optional expenditure to core expenditure in CP6, which will be reflected in the FNPO's plans accordingly

Work Type	Total expenditure (£m)
Safe Walking routes	1.9
One-off vegetation clearance	3.0
Lighting Installation	4.5
New Switch stands	1.9
Cab height plungers	0.4
Yellow Wheel Scotches	0.2
GSMR Equipment	1.0
Security - Inspection and fencing	3.0
CCTV Equipped Tail lamps	0.4
Weather proof driver shelters	0.7
GOTCHA Technical Development	0.2
GOTCHA - fitment of RFID tags	0.2
Methods of Working	0.6
Digital loads book	4.0
Total	**22.0**

A summary of the schemes that comprise the £22 million is set out in the adjacent table. FNPO has considered a range of safety-related schemes which have been discussed with ORR. The programme comprises not only the improvement of walking routes but also a number of other key safety challenges for FNPO's national customers.

Internal governance of expenditure relating to the FSIP will be fundamental. We will develop and agree these governance arrangements in advance of the start of CP6 to ensure a smooth expenditure profile for the FSIP throughout the control period. We expect the governance to take place through the FNPO Route Investment Panel which will comprise both FNPO and route representatives. The panel will include financial, operational and maintenance expertise.

The National Freight Safety Group (NFSG), the senior industry safety group for freight that consists of Network Rail and freight operators will act in an advisory role. Its remit will include advising FNPO on potential sites and works to be completed, and ultimately endorsing proposals on behalf of the sector. In recognition of our national passenger operator customers such as CrossCountry and Caledonian Sleeper, schemes will also be proposed through these operators' Level 1 safety meetings for consideration as FSIP schemes.

FNPO will work with the routes to deliver the schemes as they are committed to. In particular, the projects are expected to be delivered via the provision of Works Authority Forms (WAFs) to the route delivery units who will perform the work and charge their costs accordingly. FNPO will work with routes and customers to secure required access to carry out the safety improvements.

LNW and Wales routes: Movement of 'Optional' Level Crossing Spend to 'Core' Spend

LNW

It is widely recognised that level crossings represent one of the principal public safety risks on the railway. LNW has already improved its focus on level crossings by recognising them as a standalone asset management category in CP5, as opposed to a subset of other more established disciplines (Signalling, Off Track, etc.). This shift enables an enhanced scrutiny of the level crossing estate, promoting Network Rail's strategic aims and improving the safety of level crossings. In particular, this ensures a better balance of LNW's maintenance of the active level crossing estate with the objective to increase the number of active train detection warning systems on the network at passive level crossings.

We agree with ORR's Draft Determination conclusion that optional expenditure of £25 million for safety risk reduction measures at level crossings expenditure should be moved to core expenditure in CP6. This will be reflected in LNW's plans accordingly.

The packages of work identified for the additional £25 million safety funding reflect Network Rail's key strategic aims for level crossings. Consistent with these aims, LNW is proposing the following priorities of activity for the £25 million expenditure:

- Continued focus on targeted level crossing closures;
- Increased number of active train detection warning systems on the network;
- Prioritised elimination of passive crossings;
- Deployment of technology to supplement and replace whistle boards and telephones; and
- Technology and innovation designed to maximise safety and performance.

Although it has significantly reduced over successive years, the risk at passive footpath and user worked level crossings accounts for over half of the total level crossing risk on the network. In pursuing technology deployments, the LNW strategic plan seeks to target:

- Locations of high risk, high line speeds and high traffic volumes;
- Footpath and bridleway crossings with sighting deficiencies and whistle board protection; and
- User-worked crossings equipped with telephones in long signal sections and/or subject to high signaller workload.

After further discussion with ORR, it has been recognised that the application of the safety funding could be extended beyond overlays at passive level crossings. LNW is therefore proposing to prioritise expenditure across passive crossings and to undertake more closures as detailed below. LNW have developed the schemes in conjunction with STE.

LNW's plans for CP6 focus on the installation of modular solutions for level crossings, minimising the disruptive access required for delivery. Much of the work can be delivered during mid-week possessions, which will smooth the work bank for Network Rail's delivery teams. In respect of the work to upgrade passive to active crossings, framework contracts are in place for the supply of Overlay Miniature Stop Lights (O-MSLs). A similar arrangement will be introduced for the introduction of "Meerkat" technology (Project Meerkat is a combination of an audible warning device and O-MSL). Should the introduction of Meerkat be delayed in CP6, LNW would seek to install O-MSL solutions instead.

A summary of LNW's proposed interventions in CP6 is set out in the table, below.

Intervention	Work type	No. of crossings	Net cost in CP6 (£m)
Upgrade passive to active crossings	i-MSL	10	5.0
	O-MSL	40	6.0
	Meerkat	45	3.6
Crossing closures	Strategic closures	20	10.0
	Opportunity closures as occasions arise	5	0.4
TOTAL			25.0

Wales

One of the Wales Route's priorities for CP6 and beyond is to ensure that there is alignment with Network Rail's key strategic aims for level crossings e.g. Continued focus on targeted level crossing closures. We agree with ORR's Draft Determination conclusion that optional expenditure of £8 million for safety risk reduction measures at level crossings expenditure should be moved to core expenditure in CP6. This will be reflected in Wales' plans accordingly.

All of the packages that comprise the £8 million core expenditure will drive a reduction in the FWI for the Wales route. Wales Route have developed the schemes in conjunction with STE. Further detail on each of the packages is provided, below.

Passive Level Crossing Fund

The Wales route seeks to reduce the risk on all passive vehicle and footpath crossings. This will be achieved by prioritising high risk locations, trains in long sections and sighted only crossings. For all passive crossings, closure will be the preferred option with conversion to O-MSL as a secondary option.

Where crossings remain, technology will be upgraded to O-MSL at suitable locations. Where power supply is available, these level crossing sites will be prioritised for signalling overlay installation in the early part of CP6. This will allow time for an alternative power supply system to be developed at the more remote locations that currently have no power supply. Installation at these locations will be planned for the later years of CP6 in order deliver the works as efficiently as possible.

41 locations in the Wales route have been identified for signalling overlay installation in CP6 Wales which will provide a 0.034 FWI reduction at a total cost of £6.2 million.

Road closure Harlescott

The development of the road closure project in Harlescott commenced during CP5 and will continue into CP6. Vehicle closure is planned for CP6, with full closure early in CP7. This project will require signalling system work to remove the asset. Since the publication of the Draft Determination this work has been reassessed and does not present a risk to delivery. The work package will also require the construction of a footbridge at this location which is also not considered to present a risk to delivery. The total net of the work will be £1.8 million.

CP7 Development Fund

The third package is a development fund that includes five strategically important crossing closures across the route that will lead to a future FWI reduction of 0.072 in future control periods (based on calculated FWI reduction that these sites). The delivery of these feasibility studies poses no deliverability concerns. The CP7 Development Fund totals £0.1 million. A summary of each of the work packages is set out in the table, below.

Intervention	Net cost in CP6 (£m)
Passive level crossing fund	6.1
Road closure - Harlescott	1.8
Package 3	0.1
TOTAL	8.0

Priority User-Worked Crossings (with telephones)

We agree with ORR's Draft Determination assessment that £25 million of safety improvements in the core plan should be made in CP6, through the provision of overlay active warning systems at the highest priority user worked crossings with telephones (UWCT)

Following ORR's Draft Determination, Network Rail's Safety, Technical and Engineering (STE) function worked with Anglia, LNE, Scotland, South East, Wessex and Western to:

- Identify level crossings that would benefit from installation of Overlay MSLs; and
- EBI Gate 200 & Vamos
- Provide details for Identify level crossings that would benefit from the installation of Meerkat technology, as discussed above.

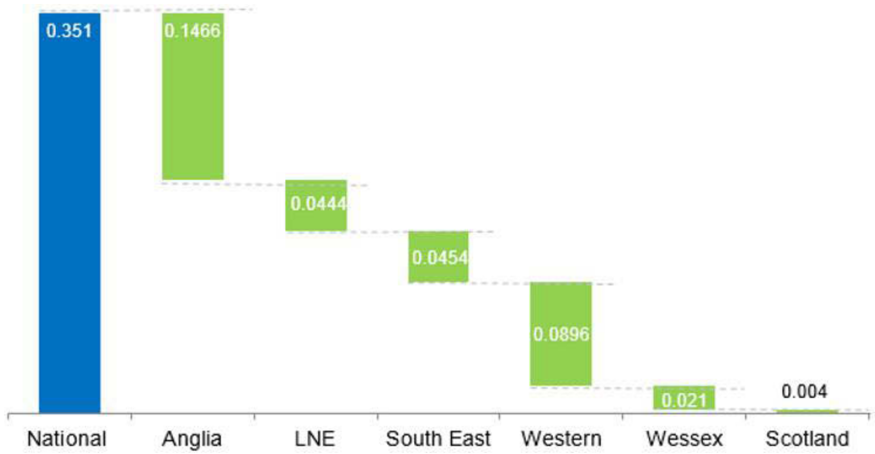
STE assessed the information received from the routes and considered three different options for delivering the required improvements. Its assessment considered how risk reduction could be optimised within the £25 million funding available.

The results of its assessment at a network-level are set out in the table, below. This information is set out for each route in Appendix A.

Option	Units	FWI Reduction
Meerkat	312	0.221
O-MSLs	178	0.160
Mixed	242	0.351

On the basis of STE's assessment, therefore, we are proposing to take forward the mixed technology installation of O-MSLs and Meerkat technology which will optimise risk reduction with the available funding.

The graph below provides a breakdown of the 0.351 FWI risk reduction by each route, which will be achieved from £25 million expenditure on the mixed technology option in CP6.



Appendix A

Anglia:

Technology	Units	FWI Reduction	Total Cost
Meerkat	81	0.0697381875	£ 6,480,000.00
OMSLs	39	0.083515963	£ 5,460,000.00
Mixed	79	0.146665752	£ 8,540,000.00

LNE:

Technology	Units	FWI Reduction	Total Cost
Meerkat	69	0.023057775	£ 5,520,000.00
OMSLs	64	0.029358901	£ 8,960,000.00
Mixed	45	0.044411817	£ 5,220,000.00

South East:

Technology	Units	FWI Reduction	Total Cost
Meerkat	62	0.029527665	£ 4,960,000.00
OMSLs	22	0.022070334	£ 3,080,000.00
Mixed	37	0.04548591	£ 3,860,000.00

Wessex:

Technology	Units	FWI Reduction	Total Cost
Meerkat	43	0.014886893	£ 3,440,000.00
OMSLs	18	0.009837386	£ 2,520,000.00
Mixed	26	0.021067494	£ 2,380,000.00

Western:

Technology	Units	FWI Reduction	Total Cost
Meerkat	57	0.083975144	£ 4,560,000.00
OMSLs	20	0.009183439	£ 2,800,000.00
Mixed	49	0.089699855	£ 4,160,000.00

Scotland:

Technology	Units	FWI Reduction	Total Cost
Meerkat	0		
OMSLs	15	0.004473861	£ 2,100,000.00
Mixed	6	0.004036729	£ 840,000.00