Network Rail's response to ORR's Draft Determination

4 September 2013

Foreword

We welcome the recognition in the Draft Determination of the significant progress the industry as a whole has made in the last decade on train performance, value for money, affordability, and above all, safety as we continue to meet ever increasing demand and renew our Victorian network. We welcome ORR's constructive approach to developing proposals for addressing the challenges the rail industry faces such as the proposals for further review of enhancement and civils expenditure which recognises that our plans will continue to improve.

We also recognise that the business has faced major challenges that we are addressing in CP4 and will continue to improve during CP5. These include major challenges in our approach to sustainable asset management and optimisation of the capacity and performance trade-offs. We are determined to keep working with the rest of the industry to maintain and build on progress. This is why we have used the time since publication of the Draft Determination to analyse ORR's proposals in detail and discuss them with our industry partners, particularly given ORR's own assessment that the chances of reaching the performance targets it has set are around 50 per cent.

The Strategic Business Plan we published in January set out the fundamental changes to which we are committed in relation to our culture, working practices, use of technology and collaboration with our customers and partners to achieve significant further improvements in efficiency. ORR's Draft Determination, unrealistically, requires us to go beyond these ambitions and deliver even higher levels of performance and cost savings with less investment, and less money to operate, manage and enhance the railway.

As a result, we believe that the cumulative impact of the scale and pace of change that the ORR has proposed across a range of activities makes the package as a whole unbalanced and therefore unrealistic. Among the issues we are concerned about are:

- the assumptions ORR has made on track unit costs, volumes of work and efficiencies which do not take account of the additional costs involved in focusing track renewals work on the critical routes that, by their very nature, are more complex both because of their higher rates of use and difficulties of access;
- the assumptions on other renewals costs are also unrealistic in that they do not allow sufficiently for risks and necessary contingencies;
- the assumptions on property income are over optimistic given the implied scale of investment and pace of change required as well as the current state of the market;
- the proposed level of spending on research and development and information technology does not recognise the potential to use technology to drive productivity, the historic level of under-spend in the industry as a whole or the link to the overall efficiency savings;
- the assumed cost of financing is too low and does not reflect current market conditions;
- the treatment of performance targets, given the scale of the challenge, the need for sensible trade-offs and the impact of external events, is inconsistent and inflexible.

As a result we are asking ORR to restore at least £1.4 billion of the £2.4 billion it removed from the Strategic Business Plan and to clarify aspects of the investment framework such that we are able to make further investments where this is demonstrated to offer value for money to taxpayers and rail users through longer term cost reduction or further outputs.

In considering the funding implications of a realistic efficiency challenge in CP5, it is critical that the implications for long term financial sustainability are also understood and that we do not increase debt unnecessarily. In the current circumstances, we assume that it would not be possible to increase our revenue requirement sufficiently to allow for the increased expenditure in CP5 and that we would need to raise additional borrowing to continue to fund the required investment. However, we are keen to work with ORR in discussing longer term funding models with government.

During CP4 we reduced risk at level crossings by 25 per cent. Misuse at level crossing remains one of the biggest safety risks and, because of our proven delivery and improved technology, we now consider that there is a stronger case to continue this improvement in CP5. We will continue to develop our analysis and consider that investment of £120 million in CP5, including the £77 million already provided by government together with the ongoing investment included within our renewals programme, could deliver a further 25 per cent reduction in risk at level crossings.

The regulatory framework is complicated and burdensome, and ultimately could lead to us being less efficient. We estimate that there will be over 3,700 measures under regulatory scrutiny in CP5. We do not consider this to be consistent with good regulatory principles. It will be important that ORR has a pragmatic approach to the interpretation of variances and is flexible in recognising that that there will be changes to our forecasts. ORR monitoring this volume of measures could become a straight-jacket with the focus not remaining on the delivery of outputs in a safe, sustainable, and efficient manner. It is critical that the framework is simple and enables us to empower our people to deliver the required improvements in partnership with our customers and suppliers.

In this document we have provided ORR with a comprehensive response to the Draft Determination. We look forward to explaining our response to ORR and working with them towards the next key milestone of the publication of the Final Determination at the end of October 2013. We also see this as a key part of the dialogue about the longer term development of the regulatory framework which is linked to ORR's consultation on its Long Term Regulatory Statement.

David Higgins

Structure of our response

This document is Network Rail's response to ORR's Draft Determination. The structure of our response is set out below. We have supported this with further analysis and evidence which can be found in the documentation accompanying this response.

Page	Section	Content
5	Summary	This provides a summary of the key points of our response, identifies the key elements of the Draft Determination that require changes and provides an analysis of the financial impact of the changes we are proposing
14	Key points of our response	This sets out in more detail the key points of our response in relation to the proposed framework for CP5 and the assumptions made in the Draft Determination on our income and expenditure
Appendix 1	Detailed response	This sets out a comprehensive response to all aspects of the Draft Determination
Appendix 2	ORR's specific consultation questions	This explains where we have responded to ORR's specific questions

Summary

Summary

The publication of the Draft Determination is a key milestone in concluding the 2013 Periodic Review. We have engaged with ORR in a constructive and challenging process in achieving this milestone. We welcome the recognition by ORR in the Draft Determination of the progress made by Network Rail and the industry as a whole in improving the value for money and affordability of the rail industry over the last decade.

In our Strategic Business Plan (SBP) we set out the company's purpose, role and vision. Our objectives for the periodic review and the basis for our decision on whether to accept the ORR determination are directly linked to this purpose, role and vision. In particular, our purpose means that our ultimate objectives for the review relate directly to the delivery of outstanding value for taxpayers and users.

Network Rail has previously written to ORR setting out its three key objectives for the periodic review and we consider that these are broadly aligned with ORR's objectives. Our objectives are:

- an improving and sustainable railway: continued investment in rail to build on the collective success of the last decade;
- a realistic settlement: it would be irresponsible to accept a challenge which is unrealistic or has a low chance of being met;
- an enabling framework: an opportunity to reform the framework to make it clearer and simpler so that we can empower our people more effectively to deliver improvements directly or through improved partnerships with our customers and suppliers.

We have carefully reviewed the individual elements of the Draft Determination and assessed it as an overall package. We also recognise that the business has faced major challenges that we are addressing in CP4 and will continue to improve during CP5. However, we consider that, taken in the round, the Draft Determination is not sufficiently balanced and is based on unrealistic assumptions. We are also concerned that there is insufficient flexibility in the proposed framework to enable us to deliver the best possible outcomes for users and taxpayers.

We therefore consider changes are required to elements of the Draft Determination in order to achieve a balanced and realistic package. The key points of our response are summarised below.

- the scale and pace of change proposed is unrealistic and the Draft Determinations is not a balanced package
- the regulatory regime is more intrusive and complex than is regarded as appropriate in other sectors
- the approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures
- the investment framework should support a broad range of opportunities including efficiency, safety and R&D
- the capacity and performance framework is inconsistent and potentially inflexible
- the assumed cost of financing is too low
- the projections of property income are unrealistic
- the proposed level of expenditure on information technology is inadequate
- the expectations on track and signalling unit costs and efficiencies are unrealistic
- the assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified
- the proposed efficiency for the management of inflation is unprecedented and unrealistic
- the enhancement framework needs to be sufficiently flexible to manage the portfolio efficiently.

These points are outlined in this summary and the main body of our response provides further explanation of these points. We have set out a comprehensive response to the Draft Determination in the appendix to this document. Where appropriate, supporting documentation has also been provided.

The scale and pace of change proposed is unrealistic and the Draft Determination is not a balanced package

The Strategic Business Plan (SBP) is an ambitious plan. In it we recognised that the business has major challenges which need to be addressed. We committed to deliver a better railway and better value to funders and customers, whilst transforming Network Rail to be able to deliver a longer term vision for the company and the railway. The scale of change we committed to was transformational, with record levels of safety and performance, a further 18 per cent cost savings on top of the 40 per cent already achieved over the last 10 years, delivery of over 70 major infrastructure projects to provide more capacity and new journey opportunities to support the continued increasing demand for rail travel and growth in traffic of around 10 per cent by the end of the control period.

To achieve this we committed to change the culture of Network Rail and build deeper partnerships with our customers and delivery partners. This has been enabled by a restructuring of the whole business and will be supported by investment in modern technology to bring up-to-date the way the rail network is operated and maintained.

The SBP was the product of a rigorous internal challenge process, significant engagement with industry and funders and positioned within the context of a longer term strategy for the railway and the company. The proposals in the SBP reflected the steps that are necessary to deliver our purpose, role and vision and our assessment of the challenges we faced. The Draft Determination goes beyond what we believe is already a very ambitious five year plan and asks us to commit to delivering more outputs and more efficiency, with less funding and

higher levels of risk and uncertainty and with less flexibility to manage these risks. We consider this to be unrealistic.

Since the SBP we have continued to develop our plans for CP5. It is clear that the plan remains very challenging and has become more challenging in some areas. The Final Determination must therefore provide greater funding and flexibility than that proposed in the Draft Determination to enable us to manage the risks that we face in delivering the required outputs safely, sustainably and efficiently.

ORR states the determination is a balanced package that is challenging but achievable in terms of efficiency, value for money and deliverability. ORR's own assessment is that we have a less than 50 per cent chance of hitting the performance targets. Our assessment is that there are many more risks than opportunities for outperformance.

It is right that we should be challenged to deliver greater value for money and it is possible that we can deliver more in the next five years than we consider likely today. However it is very unlikely that this would be the case on all aspects of our plans. The framework must recognise that there may be some elements of our plans that we will outperform and there will be other elements that we will underperform against. As ORR has stated, the determination is a package and our performance should be assessed as a package too,with success measured in aggregate rather than on performance against individual measures.

The regulatory regime is more intrusive and complex than is regarded as appropriate in other sectors

The framework appears to be based on a perception that Network Rail will respond better to the setting of challenging targets but less well when given the opportunity to outperform. Such a perception results in the setting of evermore challenging targets. We recognise that this reflects ORR's concerns about Network Rail's progress during CP4 in areas including asset management and optimisation of capacity. In our view this perception is wrong and we consider the consequences are sometimes counterproductive. Our strong view is that the company as a whole responds much better to positive incentives. It is critical that the right "motivational model" is established. Creating the opportunity and positive incentives to outperform will deliver greater benefit particularly as outperformance can ultimately be reinvested in the railway or used to reduce future revenue requirements. It is important that in the Final Determination ORR signals clearly that the framework should continue to evolve and that it recognises that if it considers Network Rail has demonstrated that it is challenging itself, then ORR should be able to reduce the level of regulatory scrutiny.

There are well established principles of good regulation – transparent, accountable, proportionate, consistent and targeted and these were reflected in our proposed principles for regulation in Control Period 5. We do not consider the proposed regime meets these principles, and nor does it provide the right balance between regulatory oversight and the discretion for Network Rail to operate with the necessary flexibility to deliver the best possible outcomes for users and taxpayers.

We recognise the need for Network Rail to deliver key outputs while continuing to address the longer term capabilities of the business and this was reflected in our Strategic Business Plan. We therefore support the need for a confident regulator which will continue to encourage progress and challenge where necessary. Critically, however, we believe that the framework must be simplified to focus on what improvement is being sought. This will help us to empower our people more effectively to deliver these improvements. Although we recognise that the business is complex, there should be a consistent pressure to reduce rather than increase the number of key indicators.

We recognise that ORR wants to be confident that Network Rail has made further improvements before it reduces the extent of its monitoring. And we understand that its proposals for CP5 stem from its experience in CP4. But it is important that ORR signals its wish to step back so that our people understand that we need to increase the level of internal scrutiny and challenge.

The volume of output, indicators and enabler measures being monitored in the proposed framework is extensive. ORR describes the Draft Determination as a package but ORR proposes to regulate each element of the package. In total, we estimate that around 3,700 measures will be monitored by ORR on a routine basis.

We agree that we need a broad range of measures so that we can effectively manage the business and we will certainly be using them to drive improvement. We also agree that we need to forecast and monitor performance across this broad range of indicators for each part of our business and that we need to be able to explain variances to ourselves and to ORR. However, we are concerned that over-zealous regulation by ORR of such a large number of measures will lead to an increased regulatory burden on the company and worsen outcomes. It is important that there is not a presumption that actual performance will always be in line with forecast as this is unrealistic. It is important that ORR signals this in the Final Determination as it will influence Network Rail and ORR's behaviour in CP5.

ORR has proposed a significant number of new regulated outputs, indicators and enablers for CP5 including the regulation of key asset management activities rather than focusing on the regulation of outputs. As noted above, we recognise the importance of these indicators to the business and our stakeholders. However, we remain concerned that enablers and indicators such as those relating to underlying capabilities, whilst important, should not become a straight-jacket and that the focus should remain on the purpose or outcome which we are seeking to achieve. This is particularly important where specific plans need to evolve – for example, in the context of the asset management maturity model, the ultimate focus should be on what is necessary to enable delivery in CP5 (which will be monitored directly) and whether we are improving the robustness of our asset management plans for CP6 and beyond. ORR should recognise in its Final Determination that our plans will evolve.

At the moment there appears to be significant overlap of the measures proposed in certain areas. For example, asset knowledge improvement is a key element of the asset capability measure which overlaps with the measures proposed for asset data quality targets and ORBIS delivery. We consider that according these measures with the same status is

disproportionate. In addition the level and granularity of some of the targets is inappropriate – for example, the required asset management maturity levels are too ambitious and are too granular. There is also a good deal to do to define the asset data to which quality targets would be applied. While we will plan to deliver the required improvements, we are concerned that, if we are unable to achieve the required targets, we might miss three targets as a result of single underlying cause. ORR should therefore clarify the consequence of missing several targets where there is the same underlying cause.

We are also concerned this level of monitoring will lead to inappropriate behaviours. Although the framework distinguishes between measures that are subject to enforcement and those that are for monitoring purposes, we are concerned that in practice the measures provided will become the subject of routine scrutiny by ORR and will potentially drive the organisation to treat all measures as fixed, formally regulated and enforceable.

The indicators required in the proposed framework include a significant volume of measures to be forecast and reported at a route-level. We clearly support greater transparency of route based information both to ORR and our customers in order for us to drive improvement. However, the reporting of measures at this level must not lead to ORR regulating Network Rail at a route-level. It is important that we have the flexibility to adjust the delivery of outputs and the allocation of resources across the routes to manage our risks efficiently. This means that we, as a minimum, need to be able to make annual adjustments to the actual results used in the REBS (reflecting significant changes in the business) subject to approval by ORR. The framework for engagement between Network Rail and ORR to review performance at a route level must not impose a further layer of regulatory engagement that duplicates the governance framework Network Rail uses to manage its business.

The approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures

We welcome ORR's proposal to focus on total financial performance rather than specific elements of expenditure or an efficiency measure. This represents the overall financial benefit to taxpayers and users.

We agree that we need to demonstrate that our reporting is robust in recognising savings in renewal costs. However, we do not consider that it is logical to insist that this should be conditional upon achievement of specific improvements in asset management or a specific confidence grading in unit costs.

The best possible outcomes for taxpayers and users are more likely to be achieved if we have the flexibility to deliver outputs in the most efficient way. We will continue to evolve our plans as we continue to identify more efficient ways of achieving outputs. It is important that ORR recognises there will be changes in the forecast indicators throughout CP5. In our view there should therefore be a presumption that savings represent efficiency improvements unless they have been achieved in a way which is demonstrably unsustainable or at the expense of other requirements. Otherwise the company will be incentivised to pursue the most easily demonstrable efficiencies rather than the greatest efficiencies. We consider that any requirement to demonstrate efficiency savings should be at a high level rather than based on a detailed explanation of positive management actions.

We agree that additional measures are required to explain variances in financing costs. We are concerned that reporting against the market could result in a situation where we will be seen to fail despite appropriate hedging. We will continue to work with ORR to develop appropriate measures.

ORR considers that it is not practicable to set out detailed prescriptive criteria for determining when and by how much a non-delivery of outputs would require a RAB adjustment. We have made proposals for a more predetermined and value-based mechanism that is akin to the approach being used for the current volume incentive. We would like to continue working with ORR to define where possible the approach to making such adjustments so that there is an agreed approach before the start of the control period.

ORR has suggested that outperformance should only be used to reduce debt or fund R&D. We propose to publish an update of our policy for use of outperformance in March 2014. Given the changes in the financial framework for CP5 we would expect to focus outperformance primarily on reducing debt or longer term investment in R&D. However, we do not consider that other uses of outperformance should be excluded as a matter of principle by ORR at this stage. Other areas where we might wish to use outperformance could include, for example, reinvestment of civils outperformance in further civils activity and additional expenditure at level crossings. Clearly we would only wish to use outperformance in this way where it is efficient and consistent with our purpose.

We have an established process of internal reviews for each business unit. We are, however, refining our proposals to clarify how the centre of Network Rail reviews performance of each business unit. We will work with ORR to develop a coordinated plan for engagement with the business both centrally and in the routes.

The investment framework should support a broad range of opportunities including efficiency, safety and R&D

We welcome ORR's aim of clarifying the mechanism for funding incremental investment that delivers future cost savings. We have continued to work with ORR to develop the mechanism further. We consider that it is important that the Final Determination broadens the scope of the framework and adjusts the values that will be logged up to the RAB so that they are sufficient to incentivise investment which ultimately benefit users and taxpayers.

The scope of the framework should be extended to cover all investment that enables improvements in the cost of operating, maintaining, renewing and enhancing the railway. This includes investment in safety, wheeled plant and corporate offices.

It needs to be clear how the proposed mechanism will be applied to investments that are justified on non-financial benefits such as improvements in safety. We propose that ORR

should treat these in the same way as investments that deliver incremental outputs, with the full investment being added to the RAB subject to approval by ORR.

The proposed investment mechanism assumes that we will achieve efficiency savings of five per cent in each year of the control period including the year in which the investment is completed. However, there is usually a lag before savings start to be delivered and we consider it is important that this is recognised in the framework so that there is an incentive to deliver further investment to achieve further benefits.

ORR also needs to consider how this mechanism interacts with the rolling treatment for investment that delivers benefits in renewals and enhancement savings. This needs to be clearly understood and taken into account in the measurement of overall financial performance.

We are concerned by a number of specific investment proposals included in the Draft Determination. ORR has included an allowance for capital expenditure relating to incremental property income that was previously funded through the investment framework. These projects are highly uncertain and are based on forecasts that are higher than have previously been achieved. It is unclear how the income and expenditure will be treated in the assessment of overall financial performance. We consider these should be treated as assumptions for the purposes of determining the revenue requirement and not as targets.

We support the principle of the civils adjustment mechanism and agree that it is an appropriate way of recognising the level of uncertainty around the efficient level of activity and expenditure. We will continue to improve our understanding and management of civils and our plans will continue to develop during CP5. As a result, it is likely that there will be changes in the specific projects included in our plan, including the balance of activity between routes.

Further investment is required to continue to reduce risks at level crossings. Safety is our number one priority. The GB railway is one of the safest in Europe. However, risk at level crossings remains one of the biggest safety risks. In CP4 we have so far reduced risks at level crossings by 25 per cent. Building on our proven delivery record in this area, exploiting new technology and opportunities to coordinate with strategic projects, we will continue to develop our analysis and consider that investment of £120 million in CP5, including the £77 million already provided by government together with the ongoing investment included in our renewals programme, could deliver a reduction in risk at level crossings of 25 per cent.

Network Rail's success relies on highly technical and complex systems engineering. The future demands on the railway will challenge the limits of our current technical approaches. Innovation is key to meeting these challenges. Following the publication of the Rail Technical Strategy for the industry, Network Rail has published more details on its strategy to support the industry in this area. We are continuing to work with the Rail Delivery Group and Technical Strategy Leadership Group to progress our plans and to make sure that these are fully integrated.

We welcome the inclusion of £50 million for R&D and we assume that this is in addition to the funding currently provided through RSSB. We have been having constructive discussions with ORR about our proposals for prioritising investment and for how the matched funding approach should work. We consider that funding should not be limited to £50 million if strong business cases can be established as this would constrain the potential for future benefits to users and taxpayers. Significant investment in R&D is required if the industry is to continue making significant improvements in the long term and the investment framework needs to allow further investment opportunities in R&D where there is a business case to do so.

The capacity and performance framework is inconsistent and potentially inflexible

The framework for performance outputs is unclear and incentives are inconsistent. The Draft Determination sets out trajectories for CP5 that deliver 92.5 per cent PPM MAA by the end of CP5 and 2.2 per cent for CaSL in England and Wales. In the Draft Determination ORR acknowledges the challenging nature of these targets and assesses the level of confidence in delivering these outputs as 45 per cent and 50 per cent respectively.

This implies that that there is a more than 50 per cent chance that we will not achieve the performance targets. ORR therefore needs to set out more clearly in the Final Determination the consequences of failure to achieve the target. The regulatory framework must recognise that this level of confidence means that half of the time we are as likely to miss the target as achieve it, and that missing the target should not therefore be regarded as unacceptable (and therefore requiring regulatory intervention) provided that we have taken all reasonable steps to meet it in what would be regarded as normal circumstances. This should not, however, be taken as indicating a lack of ambition within the business to drive performance to the best possible levels. The reputational and financial penalties for delivering performance below target far outweigh the benefits of outperformance under the current framework

The target of 92.5 per cent must not therefore be considered a minimum threshold in regulatory terms. This would require us to plan to meet a significantly higher level of performance that would be inefficient and poor value for money. In the SBP, we explained that there is a significant range of uncertainty in forecasting the precise level of performance, which means that we expect to deliver within a range from 91 to 93 per cent PPM by the end of CP5. Our latest forecasts indicate that it is highly unlikely that we will achieve the CP5 PPM trajectory in the Draft Determination in the early years of the control period, reflecting for example the impact of the disruption caused by engineering works. We have separately provided our latest analysis of the CP5 PPM trajectory.

The Draft Determination sets a minimum target for all train operators of 90 per cent PPM MAA by the end of CP5. It is the collective concern of National Task Force that setting a minimum threshold could constrain the industry and not deliver value for money. Individual operators have also stated they consider that 90 per cent is an inappropriate level of PPM to target for franchised long distance operators. Informed by our discussions with operators we

consider a more appropriate target for those operators is 88 per cent PPM by the end of CP5 with potential lower daily variability.

It is critical that there is alignment between the outputs required of Network Rail through the periodic review and the outputs of train operators specified in the refranchising process. We will not deliver the required network level performance outputs if this alignment is not achieved as train operators must continue to contribute to the improvement in performance to levels specified in the periodic review. Where operators are required to deliver a different level of performance then there must be flexibility to adjust the required level of performance delivery from Network Rail, either at an operator-level or a network-level where appropriate.

The industry has also proposed that to make the right trade-offs between outputs to make best use of the network, there should be flexibility within the regulatory framework to adjust the regulated outputs. While we welcome ORR's proposal to introduce a change control mechanism that would apply to franchise specification changes, we consider this proposal is too narrow. The mechanism needs to be broadened so that we have greater flexibility to deal with unexpected growth or other external changes.

A closely related issue is the Schedule 8 performance regime. Passenger Schedule 8 payment rates, which compensate train operators for lower than planned levels of performance, are to increase significantly in CP5. This should strengthen the incentive on us to minimise service disruption. It is important that the rates are set at the right level for Network Rail and train operators to manage performance and capacity efficiently and make the right trade-offs. There are also financial impacts, that if the rate is set inappropriately, could represent unacceptable risks to train operators, funders and Network Rail and would also send incorrect price signals to the industry including disincentive to growth. We consider the proposed rates for the London and South East commuter flows to be contrary to the empirical evidence. For other markets, the empirical evidence is not sufficiently conclusive to form the basis for such large financial flows.

It is important that Schedule 8 benchmarks are set at realistic levels, which 'line up' with the regulatory performance trajectory in the Final Determination and ensure that the regime is financially neutral when regulatory targets are achieved. Our analysis indicates that there has been a mismatch between the regulatory performance targets and Schedule 8 benchmarks during CP4. This has resulted in additional Schedule 8 costs for Network Rail of around £100 million in CP4 (and this would increase with the proposed increased rates in CP5). We welcome the constructive engagement between train operators, Network Rail routes and ORR in developing a robust methodology for 'translating' PPM targets into Schedule 8 benchmarks for CP5. We believe that this will help establish a more robust set of Schedule 8 benchmarks for CP5. We expect the final set of Schedule 8 benchmarks to be updated once the CP5 regulatory trajectory is finalised as part of ORR's Final Determination.

The capacity charge is intended to offset the additional Schedule 8 liability from accommodating incremental traffic on the network. The Draft Determination suggested consideration of a potentially different approach in CP5, in which the capacity charge and Schedule 8 regimes would use different payment rates. If this approach was adopted, it would mean that the increased Schedule 8 liability from traffic growth would only be partially offset by the capacity charge and we could be at risk of making an overall loss from traffic growth precisely where additional paths are most valuable. This could lead to Network Rail having weak financial incentives to maximise the use of certain parts of the railway, which could lead to a loss of value to funders and passengers.

Subsequent to the publication of the Draft Determination ORR consulted on two alternatives to the retention of CP4 capacity charge rates. The industry has worked closely together to agree a joint position on the relationship between Schedule 8, the capacity charge and the volume incentive for CP5. This work has been progressed through RDG's working group on contractual and regulatory reform. It has been endorsed by all RDG members. It is clear that RDG's proposal is similar to one of the alternative options proposed by ORR. Network Rail supports the RDG proposal.

The assumed cost of financing is too low

We agree with ORR that interest costs are likely to be lower than we assumed in the SBP. There are three primary drivers of the reduction in our latest forecast of interest costs since the SBP. First, the pre-hedging of interest rates that we have implemented relating to debt to be issued in CP5 to take account of current interest rates. Second, we are assuming lower LIBOR spreads than the SBP, although this does increase the risk that these will not be achieved if market conditions are not as we expect. Third, ORR assumed a lower FIM fee than we included in the SBP.

There are a number of areas where we disagree with ORR's new nominal debt cost assumptions for CP5. The assumptions in the Draft Determination for forward market rates are now too low and were taken by the ORR at a low point in the rate cycle. Therefore, these rates should be updated to be more consistent with current market values. Furthermore ORR does not sufficiently take into account potential volatility of future market rates (such as in the context of the likely impact of changes to monetary policy).

ORR assumes that we will hedge 100 per cent of forecast debt issuance and assumes costs on that basis. As explained below, we do not consider this to be efficient. ORR's assumed LIBOR spread (including issuance costs) is within a reasonable range in the context of current and historical market pricing, but it does not provide headroom for any adverse movements and factors outside our control. An additional LIBOR spread is proposed and is justified to be more reflective of prevailing market uncertainties over the five years of CP5.

The quantum of debt outstanding is too low in the Draft Determination, because it understates the likely end point for CP4 and underestimates the amount of debt that will be raised during CP5, some of which is the consequence of different spending assumptions.

In the Draft Determination, ORR assumed that Network Rail holds no cash at the end of CP4, which is not a realistic assumption as Network Rail like any normal company will hold cash for its short term liquidity purposes and at times will hold more cash particularly if it has forthcoming debt redemptions. This is prudent cash management.

We recognise that ORR has assumed that Network Rail will issue some index linked debt during CP5 and agree that we will issue some index linked debt. We also agree the new index linked cost of debt rate proposed by ORR

ORR's cut-off date for taking into account our CP4 embedded debt and CP5 pre-hedges should be as late as is reasonably possible in order to ensure that its forecast of our overall cost of debt in CP5 is as accurate as possible and includes all executed pre-hedges and debt issuance.

We welcome ORR's statement that our existing debt was efficiently raised at efficient rates. We note that ORR will take account of 100 per cent of the costs of our embedded debt and hedges as part of the Final Determination, and we recognise that we need to demonstrate that it has been efficiently incurred.

Reflecting the above issues, financing costs in the Draft Determination need to be increased by £689 million (in 2012/13 prices).

The projections of property income are unrealistic

ORR's assumptions are based on the DTZ 'Upper' scenario for property income which is £374 million higher than the SBP, comprising additional income of £251 million and inclusion of income previously funded through the investment framework (£122 million). This equates to an increase in annual income of £123 million by 2018/19. This is assumed to be delivered through untested and speculative growth assumptions as well as investments which are not funded and in some cases not deliverable. We are not aware of the objective justification for this decision.

The assumed increase would require a major change to the management of railway property. While we are ambitious to grow our property income, it is important to recognise this would take time to implement. It will also increase the risk of our property activity as we take on more complex projects.

ORR has assumed speculative income growth of £97 million derived from developer funded enhancements. The scale of this additional investment is so unprecedented that it would increase investment framework income by 80 per cent, when already the majority of schemes are yet to be defined and require an almost fivefold increase in overall development receipts for funding.

ORR has assumed a greater success rate in converting potential sales into actual sales resulting in further income of £75 million. This does not recognise the current depressed nature of the development market that is expected to continue well into CP5 or the challenging physical nature and unfavourable geographic distribution of our sites.

ORR has assumed increased managed stations income of around £50 million through conversion of protected leases as well as higher growth rates. This does not reflect the evidence of the potential increase achievable or the willingness of tenants to negotiate. There has also been no allowance made for the up front investment required to achieve this.

We consider ORR's assumptions are optimistic in a number of other areas including roadside and managed stations advertising and other managed stations income.

Jones Lang LaSalle, which has extensive specific experience of railway properties and developments, substantially agrees with the projections and underlying rationale of the SBP. It concludes that the SBP forecasts are generally reasonable and in some areas optimistic. The only area where it considers there is scope to increase the SBP is sales and development, where an additional £6 million is suggested.

The proposed level of expenditure on information technology is inadequate

We welcome ORR's recognition that forecasting IT expenditure is uncertain and that it is continuing to review further evidence on the required level expenditure before it publishes the Final Determination. We also welcome its proposal to include a framework for funding incremental investment during CP5 to deliver further benefits in CP5 and beyond.

ORR has reduced IT investment by £275 million to £338 million. The level of investment assumed will enable us to deliver the core renewals to manage our existing IT infrastructure, regulatory and legal requirements and the majority of traffic management (which total £344 million in our plan) but it is not sufficient to support investment in new systems to deliver our CP5 outputs. We have provided ORR with further analysis to demonstrate that £181 million more than Draft Determination is required to achieve specific improvements that were reflected in the SBP in other parts of the business. We also consider that the remaining balance of £88 million is required to enable further stretch savings that are reflected throughout the SBP, although we recognise that detailed analysis of these schemes has not yet been developed.

We do not agree with ORR's assumption that IT investment in CP5 should be a continuation of CP4 levels when IT systems are becoming more integrated into the running of the railway operation. We also do not agree with ORR's inclusion of ORBIS as part of the assessment of IT expenditure, as ORBIS is primarily a business change programme with 71 per cent of its costs associated to business change and only 29 per cent associated with technology.

Our SBP did not clearly explain the efficiency savings in our IM operating costs offset by the impact of incremental costs in both CP4 and CP5. While we welcome ORR's recognition of the incremental impact of traffic management on operating costs, it has not taken into account the full effect of new systems. Our plan for CP5 includes a reduction in IM's annual running costs of £14 million (24 per cent) by the end of CP5. This is offset by the incremental costs for managing new systems in CP5 which we expect to be £10 million by the end of CP5. We therefore consider the additional efficiency assumed by ORR is unrealistic as our plan already assumes we will improve underlying efficiency by 24 per cent.

The expectations on track and signalling unit costs and efficiencies are unrealistic

We commissioned independent consultants, Turner & Townsend, to carry out an independent review of the accuracy and robustness of both the SBP and the Draft Determination. They have found the reductions in track and signalling unit costs in the Draft

Determination relating to risk and contingency to be incorrect. In their opinion, the two per cent reduction for track unit cost is not appropriate as the opportunity for cost reduction through central management of risk and contingency that is implied by ORR will not exist in CP5. The consultants have also concluded that the three per cent reduction in signalling unit costs would reduce costs to an unmanageable level for CP5. They also do not agree with ORR's grading of our track benchmarking and efficiency work which they consider should be graded "good" rather than "fair". This should be reflected in ORR's efficiency profile. Overall the consultants have found little justification for ORR's further efficiency assumption.

The CP5 track expenditure plans in the SBP are already very challenging both in terms of delivery rates and efficiency profile, particularly given the increased complexity and criticality of the work proposed in CP5. Over CP4, we have developed a greater understanding of costs, particularly those elements that can be influenced. This analysis shows that in CP5 we will have the opportunity to drive savings in just over half of the overall track spend. We are working with our supply chain and our customers to deliver savings without compromising safety or sustainability of our assets. The cost of track renewals varies significantly between different projects, based on geography, access work requirements and other factors. We have found the criticality of the route and the complexity of the work to be undertaken are correlated and drive cost upwards. The proportion of work of this nature is increasing considerably from the beginning of CP4 to CP5 as the focus on high criticality routes was not in place for the whole of CP4. The level of access also has a major impact on the cost of work.

In light of the increased complexity of our work and constraints around access to the network, the unit rates and efficiency profile in our SBP are already a significant challenge. We recognise that we have not delivered the track volumes that were planned for CP4 nor achieved the assumed reductions in unit costs. It is clear that successful management of track renewals continues to be a major challenge and it is essential that funding is based on realistic assumptions so that we have a reasonable prospect of success. We are concerned that the savings included in the SBP are already very challenging and that ORR's current assumptions mean failure is highly likely.

Our ability to reduce signalling unit costs beyond the level proposed in the SBP is limited, especially in the earlier years of CP5 as contracts have already been let and workbanks have been locked down. Contrary to ORR's view, our new contracts have not transferred more risk to our contractors. In fact our new signalling contracts result in higher risk to Network Rail but lower cost. Furthermore our ambitious efficiency targets are dependent on the use of novel technology which inherently increases risk compared to the use of conventional technology. We therefore do not agree with ORR's that signalling unit costs can be reduced further than assumed in the SBP.

The further savings of £365 million for track and signalling renewals included in ORR's Draft Determination are not realistic.

The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified

Cuts have been made to our pre-efficient expenditure on the basis of issues with our unit costs. These cuts significantly reduce the probability that we will be able to achieve our planned renewals work within budget.

The reductions in the Draft Determination on the grounds of risk and contingency are inappropriate. It is legitimate and proper that we accounted for contingent spend within our unit rates, and due to the increase in the use of novel technology and processes which will be required to meet our ambitious efficiency goals, if anything contingent spend is likely to be higher in CP5 than we have allowed for in the SBP.

Further, ORR has cited a "lack of a programme level understanding of risk" as a key reason for making reductions in most asset categories. This is not a sound basis on which to reduce funding because the level of contingency across the programme is very low for capital works of this scale and risk is already managed within Network Rail at the appropriate level to disincentivise the use of contingent funds.

We believe ORR's assertion that our new signalling renewals contracts have transferred risk to the supply chain to be incorrect. The increased collaborative nature of the agreements leads to greater risk sharing on our part.

The reduction in the scope of buildings renewals implied by the Draft Determination will have implications for the sustainability of outputs and will lead to sub-optimal whole life costs. If the reduction is not reversed in the Final Determination then these consequences for CP6 need to be acknowledged.

The SBP forecasts of buildings activity do not rely on modelling of asset degradation rates as is claimed in the Draft Determination. CP5 activity is largely driven by recent condition assessments and route plans comprise detailed workbanks. In our view the challenge to degradation rates is an assertion by the reporter that has not been supported by any evidence.

The proposed efficiency for the management of inflation is unprecedented and unrealistic

ORR's Draft Determination includes a highly unconventional additional efficiency target for Network Rail to improve its "management of inflation". ORR considers that we should be able to manage some of the impact of inflation on our cost base by different ways of working with our suppliers. This is an unconventional regulatory approach. We and our advisors do not consider that there is any regulatory precedent for ORR's proposed approach.

ORR's approach would add an additional 0.2 per cent per year of efficiency challenge in Control Period 5. Whilst this may appear small it amounts to about £150 million of further savings for the company. We do not agree with ORR's logic or its proposed approach. We consider that this policy would 'double count' aspects of the efficiency challenge.

ORR has included additional savings of around £60 million over CP5 for improved management of occupational health. It is not appropriate to include additional savings for a further specific initiative to savings that have already taken into account both a top-down approach and a "stretch" within a bottom-up assessment. We also have seen no justification that this level of savings can be achieved from improved occupational health management.

ORR has included further savings in maintenance, operations, support and industry costs that are unrealistic. These are at least partly based on top-down analysis of total operating costs which should not be applied to individual cost categories.

The enhancement framework needs to be sufficiently flexible to manage the portfolio efficiently

We welcome the recognition in the Draft Determination that many of the schemes proposed for CP5 are at an early stage of development and we support the proposal to allow further development activity before the funding of the enhancements portfolio is fixed.

Since publication of the Draft Determination, we have been having constructive discussions with ORR on the approach for confirming project costs in a progressive way as we gain greater certainty of the level of funding required. The approach needs to enable Network Rail to retain the flexibility to manage risks, and therefore funding, across the portfolio as a whole. Our discussions have included revising the approach set out in the Draft Determination with outputs and funding for all projects being confirmed by March 2015. ORR recognises that it is not value for money to set the funding until projects are better developed and to be consistent with this should allow the funding to be progressively fixed through the control period as projects mature to a single defined option and Network Rail commits to scope and milestones. There are a small number of key programmes such as the electric spine where elements of the programme will not reach a single option definition until later in the control period.

While we recognise that the framework will allow funding changes to be made during the further project reviews, we are concerned that the expected costs for projects assumed in the Draft Determination are unrealistic. We have examined the assumptions made by ORR in terms of adjustments to scope, risk and efficiency that we assumed in the SBP and do not consider these adjustments are justified, particularly for the Northern Hub and East-West rail programmes.

We will work with passenger and freight train operators and seek to enter into commercial arrangements that reward the operators if enhancement cost savings are achieved as a result of their involvement. We would expect this to apply to the projects that are in an early stage of development, and to cover efficient scope to achieve outputs, early agreement of network and station change, and efficient access for delivery. We will seek to use REBS as a basis where appropriate.

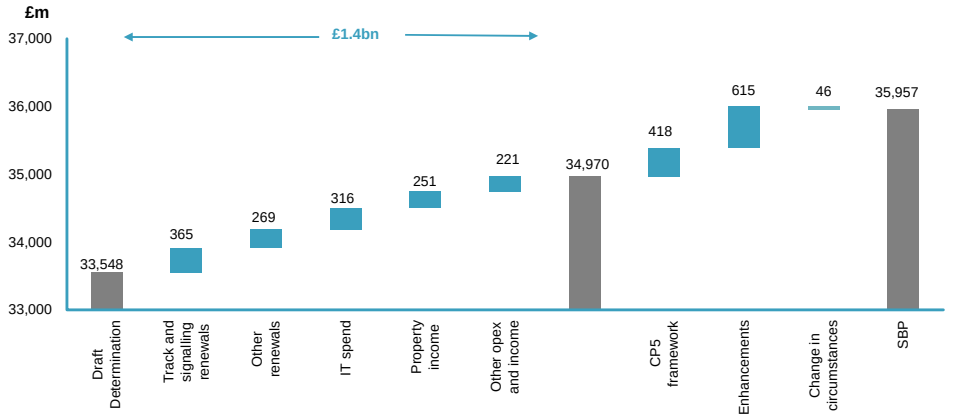
What needs to change and the financial consequences

As explained above, we consider that there are a number of important issues with the Draft Determination and these are summarised below:

- the scale and pace of change proposed is unrealistic and the Draft Determinations is not a balanced package
- the regulatory regime is more intrusive and complex than is regarded as appropriate in other sectors
- the approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures
- the investment framework should support a broad range of opportunities including efficiency, safety and R&D
- the capacity and performance framework is inconsistent and potentially inflexible
- the assumed cost of financing is too low
- the projections of property income are unrealistic
- the proposed level of expenditure on information technology is inadequate
- the expectations on track and signalling unit costs and efficiencies are unrealistic
- the assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified
- the proposed efficiency for the management of inflation is unprecedented and unrealistic
- the enhancement framework needs to be sufficiently flexible to manage the portfolio efficiently.

To address these issues requires some clarification or refinement to the proposed regulatory framework and we are keen to explore this further with ORR and the rest of the industry. But it also requires some changes to the assumed expenditure levels in the Draft Determination.

Changes in planned expenditure



The chart above illustrates the changes to our planned expenditure in CP5 from the Draft Determination that we consider necessary to make the Final Determination a realistic settlement. The chart also shows how other elements of expenditure proposed in the SBP but not provided for in the Draft Determination are either accommodated through the proposed investment framework or the expenditure is no longer justified due to changes in circumstance.

ORR should restore £1.4 billion of income and expenditure that it has removed from the SBP. The level of cost reduction in our SBP for track and signalling renewals (£365 million) is already a very significant challenge and it is unrealistic to assume that we will achieve even more savings. Significant reductions have been assumed for unit costs and further efficiency savings across other categories of renewals (£269 million), which are not justified. The overall level of core renewals in the SBP is still necessary even if ORR or Network Rail reallocates some of this towards track renewals. ORR has not included sufficient investment in IT to support the efficiency savings elsewhere in the business, although it has recognised in the Draft Determination that it needs to do further work in this area. It has also assumed further efficiency savings in the operating costs for our Information Management function that we do not sufficiently recognise the incremental system management costs that we will incur in CP5. The overall IT expenditure in the SBP, which is £316 million higher than SBP, is required to manage existing systems and to support improvements throughout the business. ORR has assumed we can achieve a significant increase in property income (£251 million) which does not reflect current market conditions.

It has also not included sufficient investment to enable the assumed increase in revenue. Reductions have been to operating costs, maintenance, other support functions and industry costs. It has also not recognised the incremental costs that will result from the asymmetric route efficiency benefits sharing mechanism and the incremental costs that will result from the transfer of assets from the British Railways Residuary Board. This is partly offset by the apparent omission of some open access income. These total £221 million.

The key areas of expenditure addressed by the regulatory framework, rather being funded directly through the determination, relate to research and development (£300 million in the SBP), additional civils expenditure (£251 million), and safety related investment (£157 million). We have also assumed that additional level crossings expenditure will be funded through the framework. In this category we have also included the additional income (£179 million) and capital expenditure (£466 million) for property and other schemes that were previously funded separately from the periodic review through the investment framework.

The aggregate adjustment to enhancement funding is £615 million and is subject to a further review in March 2015. We will work with train operators to achieve the significant cost reductions but there is a risk that we will not achieve the assumed savings.

The amendments that have been made as a result of changes in circumstance since the SBP include a reduction in electric traction costs, the impact increased Schedule 4 rates and the impact of the revised cost of capital on future facility charges. This is a net reduction of £46 million.

The increases in operating costs and other income result in an increase of £513 million in the CP5 revenue requirement. On the basis that renewals expenditure is added to the RAB, the total expenditure increase results in increased financing costs of £134 million. The way that the assumed expenditure translates into our revenue requirement also depends on assumed interest costs and the approach to amortisation. The assumed interest costs are lower than in the SBP reflecting our hedging strategy and current market conditions but they are still £689 million higher than assumed by ORR in the Draft Determination.

In considering the funding implications of a realistic efficiency challenge in CP5, it is critical that the implications for long term financial sustainability are also understood and that we do not increase debt unnecessarily. In the current circumstances, we assume that it would not be possible to increase our revenue requirement sufficiently to allow for the increased expenditure in CP5 and that we would need to raise additional borrowing to continue to fund the required investment. However, we are keen to work with ORR in discussing longer term funding models with government.

We continue to stress the importance of sufficient balance sheet headroom and the need to consider this in the context of longer term sustainability of the funding model. However, we do not believe that, for CP5, the appropriate level of the debt to RAB ratio can be considered in isolation from other measures of financial sustainability. We believe that it is necessary to consider different metrics for different purposes. For example, the ability to withstand operational shocks is more closely related to the absolute level of equity; and the ability of funders to afford future RAB payments is more closely represented by the ratio of the RAB to farebox.

Conclusion

The Final Determination provides the opportunity for Network Rail and the industry to build on the progress of the last decade in improving levels of safety, performance, traffic growth, passenger satisfaction and cost savings. ORR acknowledges the network is increasingly complex and busy, and more flexibility is required to manage the trade-offs and risk effectively, and deliver better value for money to funders and users.

We do not consider the Draft Determination provides the funding or flexibility required to achieve this and deliver the required outputs safely efficiently and sustainably. We have identified the key aspects that require change in the Final Determination for it to be a balanced package.

The periodic review process has been constructive and professional. We therefore look forward to working with ORR towards its Final Determination and to a continued constructive dialogue throughout CP5.

Key points of our response

This sets out in more detail the key points of our response in relation to the proposed framework for CP5 and the assumptions made in the Draft Determination on our income and expenditure

The scale and pace of change proposed is unrealistic and the Draft Determination is not a balanced package

Key points

The Strategic Business Plan (SBP) is an ambitious plan. In it we recognised that the business has major challenges which need to be addressed. We committed to deliver a better railway and better value to funders and customers, whilst transforming Network Rail to be able to deliver a longer term vision for the company and the railway. The scale of change we committed to was transformational, with record levels of safety and performance, a further 18 per cent cost savings on top of the 40 per cent already achieved over the last 10 years, delivery of over 70 major infrastructure projects to provide more capacity and new journey opportunities to support the continued increasing demand for rail travel and growth in traffic of around 10 per cent by the end of the control period.

To achieve this we committed to change the culture of Network Rail and build deeper partnerships with our customers and delivery partners. This has been enabled by a restructuring of the whole business and will be supported by investment in modern technology to bring up-to-date the way the rail network is operated and maintained.

The SBP was the product of a rigorous internal challenge process, significant engagement with industry and funders and positioned within the context of a longer term strategy for the railway and the company. The proposals in the SBP reflected the steps that are necessary to deliver our purpose, role and vision and our assessment of the challenges we faced. The Draft Determination goes beyond what we believe is already a very ambitious five year plan and asks us to commit to delivering more outputs and more efficiency, with less funding and higher levels of risk and uncertainty and with less flexibility to manage these risks. We consider this to be unrealistic.

Since the SBP we have continued to develop our plans for CP5. It is clear that the plan remains very challenging and has become more challenging in some areas. The Final Determination must therefore provide greater funding and flexibility than that proposed in the Draft Determination to enable us to manage the risks that we face in delivering the required outputs safely, sustainably and efficiently.

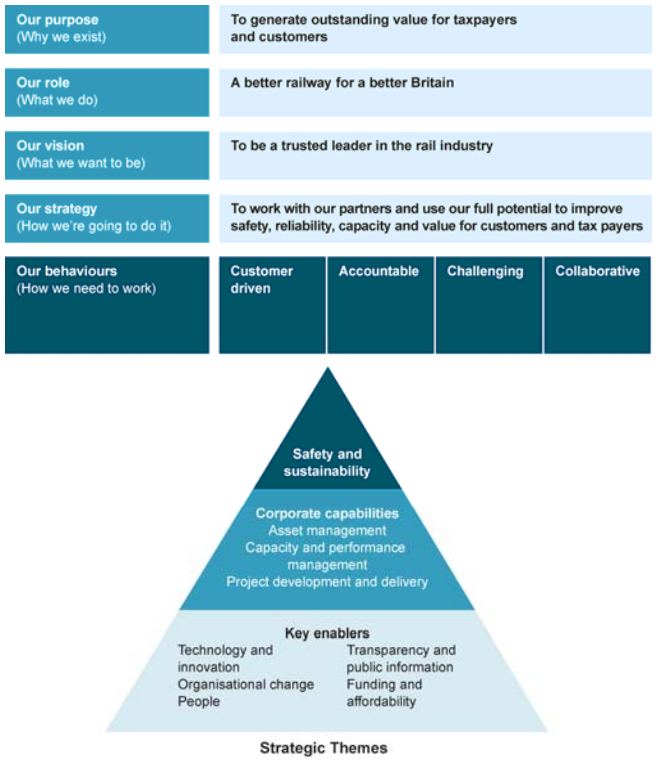
ORR states the determination is a balanced package that is challenging but achievable in terms of efficiency, value for money and deliverability. ORR's own assessment is that we have a less than 50 per cent chance of hitting the performance targets. Our assessment of the Draft Determination is that there are many more risks than opportunities for outperformance.

It is right that we should be challenged to deliver greater value for money and it is possible that we can deliver more in the next five years than we consider likely today. However it is very unlikely that this would be the case on all aspects of our plans. The framework must recognise that there may be some elements of our plans that we will outperform and there will be other elements that we will underperform against. As ORR has stated, the Draft Determination is a package and our performance should be assessed as a package too, with success measured in aggregate rather than on performance against individual measures.

Network Rail's objectives for the periodic review

In the Strategic Business Plan (SBP) we set our purpose, role and vision. Building on this clarity of purpose, we identified the key outcomes which we aim to deliver for 2014 and 2024 and these outcomes are grouped into strategic themes.

Our objectives for the periodic review and the basis for the decision which we will eventually need to make about whether we are able to accept the ORR determination are linked directly to this purpose, role and vision. In particular, our purpose means that our ultimate objectives for the review relate directly to the delivery of outstanding value for taxpayers and users - this perspective is fundamental to our approach to all aspects of the review. Moreover, given our view of the company's role in relation to that purpose, we consider that the review should facilitate more effective partnership with our customers and suppliers - we see this as one of the key opportunities from the review. Finally, we consider that a successful review should create the opportunity for us to move towards our vision for the company - although of course the fulfilment of this opportunity will still depend on the company's ability to deliver and to change.



Against this background, our specific objectives for the periodic review are divided into three areas.

• ***An improving and sustainable railway.*** Our objectives for the review included objectives for the outputs which we are asked to deliver and we consider it is important that these outputs are delivered in a sustainable way. Governments clearly have a fundamental role in deciding these outputs and the Initial Industry Plan (IIP) sought to inform their decisions by setting out the industry's views on the opportunities and challenges for CP5. The IIP incorporated a great deal of work with all our stakeholders, for example through the programme of Route Utilisation Strategies (RUSs) and the development of major new projects.

• ***A realistic settlement.*** An even more fundamental objective for us relates to the need for consistency between the outputs which we are asked to deliver and the funding available to deliver those outputs. We recognise the need for improved value for money. At the same time, however, it would be irresponsible of us to accept a challenge which is unrealistic or has a low chance of being met. Apart from the consequences for the company, this would be contrary to the long term interests of users and taxpayers since failure to meet the targets could eventually result in higher revenue requirements.

• ***An enabling framework.*** As well as the outputs and the level of funding, the periodic review will establish much of the regulatory framework for the next five years. Combined with the government's refranchising programme, this therefore represents an almost unique opportunity to reform the framework within which we operate so that we can ultimately deliver better outcomes for the taxpayer and rail user. Our objective is to use the periodic review to improve the clarity and simplicity of the regulatory regime so that we can empower our people more effectively to deliver these improvements either directly or through improved partnerships with our customers and suppliers.

Our objectives are therefore closely aligned to those of the ORR and we welcome the constructive way in which the review has been managed. We are keen to maintain a strong focus on the strategic themes outlined in our dialogue with ORR so that we can together help to deliver better value for users and taxpayers.

Our plans build on the success of the last decade

The GB railway has delivered unprecedented growth, carrying record levels of traffic, and at record levels of performance and safety. This has resulted in record levels of customer satisfaction. At the same time the industry has halved the subsidy required from governments. This success has placed rail at the centre of the governments' strategy for a dynamic, sustainable transport system that helps drive economic growth and competitiveness.

The publication of the High Level Output Specifications and Statements of Funds Available in 2012 committed significant investment in Control Period 5 in the rail network. This vote of confidence in rail is built on an impressive track record. The rail network today:

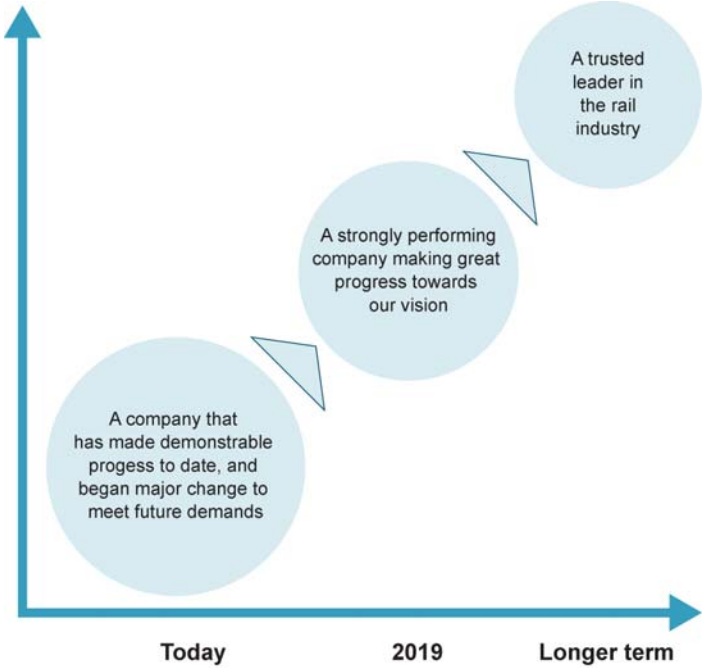
- is the second safest railway in Europe, and is significantly safer than road and comparable with air transport
- carries more trains than ever before, with ten per cent more train kilometres than 2004/05 and three per cent more freight moved over the same time period
- delivers more trains to their destinations on time, with punctuality (PPM) improving from 83.6 per cent in 2004/05 to 91.6 per cent in 2011/12
- delivers improved asset performance with greater reliability and sustainability; for example, broken rails have fallen from 322 in 2004/05 to 125 in 2011/12
- is increasingly more efficient; we delivered a 27 per cent efficiency improvement in CP3 and a further 20 per cent in CP4. We have reduced our operating and maintenance costs per vehicle kilometre by 46 per cent between 2003/04 and 2011/12.

We therefore welcome the strong recognition from ORR in its Draft Determination about the progress which has been achieved by the industry.

To realise our vision we have committed to change

At the same time, we recognise the need for change where there are still major challenges. This is illustrated in the diagram below. Our vision requires a culture that empowers our people to realise their full potential. To show how they contribute to our vision we have created a roadmap to delivery based on long term outcomes. This is supported by shorter term outcomes to be delivered by 2019, the end of Control Period 5. This will help measure our progress.

We will continue to develop an environment that allows our people to use their full potential to contribute to the achievement of our vision for the railway and for Network Rail. Key to transforming Network Rail as a company will be improving the way we trust, value and support our people. Key to delivery of the very significant change and efficiency agenda is the capability of our people managers, and the associated tools they have to do their jobs. It is will be important that the Final Determination provides targets and a framework that enable us to motivate our people to succeed.



In the past two years we have delivered major change across Network Rail:

- devolved ten routes in the space of twelve months with 24,000 staff involved
- re-shaped Infrastructure Projects to enable a greater commercial focus with 5,000 staff involved
- created an alliance with South West Trains with 2,000 staff involved with significant changes required to our internal processes
- further alliances - we have adopted different forms of alliances elsewhere depending on the circumstances so this involves most of our people in some way We are negotiating extensions of our alliancing arrangements both with incumbent operators and through the refranchising and franchise extensions
- relocated our operating centre from various offices to a purpose built centre in Milton Keynes with 3,000 staff directly involved
- developed the key operating principles for the "centre" of Network Rail.

Development of our plans

Since the publication of the SBP, we have focussed on how change and efficiencies will be implemented, managed and monitored in CP5 across a devolved business. We have appointed a Strategic Change Director to bring together our business change activity with the development of our CP5 Business Plan. The current portfolio includes over 200 programmes and projects, including a large number that will deliver improvements in CP5. Further change will be delivered locally by each of our business units, particularly the routes.

An example of the further progress we have made is the development of our depot project in which we are examining the operation of a depot, including the relationships between people, process, technology and the associated behaviours, to transform inputs and drivers into outputs and outcomes for the operational infrastructure. Our approach entails identification and analysis of current working practices of depot staff so that we can optimise depot operational culture.

A balanced package

We have reviewed the implications of the Draft Determination across all elements of our plans for CP5. The review comprises qualitative and quantitative analysis undertaken to assess the impact of delivering the required outputs within the additional constraints of the Draft Determination.

We have re-run our established engineering, financial and operational models which have provided us with clear comparisons between the SBP and the Draft Determination. We have undertaken further Monte Carlo analysis in the area of renewals, with particular focus on track and signalling so that we have a good understanding of the probability of outcomes resulting from the Draft Determination proposals. We have also examined the findings of external parties which provide an independent view of reasonable assumptions.

In the table below we summarise the conclusions of this analysis. We present the result of the assumptions made in the Draft Determination compared to our SBP. We have classified the components as cautious, challenging, optimistic, or unrealistic. In nearly all areas, our SBP sets a challenging proposition, and in some cases we have pushed the boundaries of what might be achievable. In areas we have classified as optimistic, success will be dependent on excellent performance as well as favourable external conditions.

The Draft Determination has made many assumptions that are optimistic. In the light of our analysis, we have concluded that some are unrealistic. A balanced package should consist of a set of challenging targets, or a package of targets that present a challenging target overall – as we set out in the SBP. The Draft Determination has created an imbalanced package.

There are diminishing returns to the level of efficiency

It is well understood that as an industry matures it becomes increasingly difficult to drive efficiencies. This is recognised by ORR's use of the CEPA/OXERA analysis for operations and support costs, which demonstrates that on average a company operating in a regulated industry makes fewer and fewer efficiency gains with each successive control period. In effect, there are diminishing returns as to what an organisation can achieve in terms of simply driving cost from its day-to-day operation.

An important element of the CEPA/OXERA analysis is that it assumes that following Hatfield Network Rail effectively returned to pre-privatisation levels of inefficiency, and therefore should be compared to other industries in only their third control period of development, rather than those entering their fifth as is the case for Network Rail. Whilst we agree that Network Rail has a very different cultural and philosophical approach to its predecessors, it is still the same infrastructure manager operating under a similar license. It has not been established that this "reset hypothesis" is appropriate in an economic sense, and its use places an artificial expectation of what should be achievable.

We consider that the plans submitted in our SBP are at the limit of the pace of change we can achieve at this stage in our efficiency journey, and that the additional challenge proposed by the Draft Determination is over and above what can reasonably be expected from a relatively mature infrastructure manager such as Network Rail.

If Network Rail needs to deliver faster change beyond the SBP, this will put stress on the organisation's ability to deliver change. There is a fine balance between delivery of our change portfolio and the ability of the business to absorb this within a single control period while still achieving the regulatory outputs and underlying activity levels.

	Component assessed	Cautious	Challenging but realistic	Optimistic	Unrealistic	Comment
OUTPUTS	Overall Passenger Performance			SBP/DD		CP4 exit rate position has made achievement significantly more challenging. Target needs to be treated as an expected outcome which means that half of the time actual performance will be worse than target.
	Individual Operator Performance		SBP		DD	Minimum threshold of 90 per cent not realistic especially for long distance operators. 88 per cent is a more realistic threshold.
	Freight Delivery Metric		SBP / DD			SBP and DDs are consistent.
	Network availability			SBP	DD	SBP profile was reflected in the DD but spend was re-profiled. Updated PDI forecast has been provided as part of our response.
	Asset Management capability				DD	Forecasts were not included in the SBP. The ORR has chosen the mid-point of the range from AMCL. Low end would meet objective and be more appropriate as a target.
	Sustainable asset stewardship		SBP	DD		The ORR has taken a different view to us on our asset stewardship and how asset sustainability is measured. This reduces the likelihood that we will be able to satisfy the ORR that we are properly sustaining our assets. Our asset policies set out how sustainability is assessed, and we suggest that this is confirmed as the agreed approach so that all parties are clear.
EXPENDITURE	Operations costs		SBP	DD		The increased efficiency on non-signaller spend is not justified and disproportionately impacts critical response staff.
	Maintenance costs		SBP	DD		Our plans include a significant element of stretch. The DD increases the exit efficiency and therefore the risk of compulsory redundancies and industrial action.
	Support costs		SBP	DD		IM opex and insurance cost reductions are overly optimistic.
	Industry costs		SBP		DD	CREDO approach on inflation has no regulatory precedent, both here and elsewhere
	Renewal costs (track / signalling)			SBP	DD	The unfounded unit cost reduction and unevidenced increase to efficiency make a challenging proposal undeliverable. Signalling contracts are in place for CP5 and we have limited ability to influence the cost beyond that which we have already quoted in our SBP.
	Renewal costs (other)		SBP	DD		Unit cost reductions introduce greater stretch to all parts of renewals.
	Enhancement costs		SBP	DD		Framework de-risks for the present but the DD implies unrealistic expectations of cost reductions.
	Other single till income - property		SBP		DD	Commercial property income forecasts in the DD are too high.
	Other single till income - other			SBP	DD	Greater certainty and consistency is required between PR13 and PR14 (HS1 review).
	Electric traction	SBP	DD			Most cost is passed through and based on DECC forecasts.
FINANCIAL FRAMEWORK	Financing costs	SBP			DD	The ORR has allowed insufficient risk headroom in forward market rates.
	Schedule 4 & 8 rates/Capacity charges		SBP		DD	The ORR approach to charge link between capacity charges and schedule 8 fractures the regime.
	Alliancing		SBP	DD		The REBS asymmetry has not been recognised by the ORR.
	Traffic growth initiatives			SBP / DD		Freight and passenger growth figures are too high and will likely lead to negative VI financial flows.
	Investments - IM			SBP	DD	Investment is required to enable efficiencies to be achieved. Framework required to allow us to make the case for further investment subject to business case.
	Investments – R&D		SBP		DD	Framework required to allow us to make the case for further investment subject to business case

The regulatory regime is more intrusive and complex than is regarded as appropriate in other sectors

Key points

The framework appears to be based on a perception that Network Rail will respond better to the setting of challenging targets but less well when given the opportunity to outperform. Such a perception results in the setting of evermore challenging targets. We recognise that this reflects ORR's concerns about Network Rail's progress during CP4 in areas including asset management and optimisation of capacity. In our view this perception is wrong and we consider the consequences are sometimes counterproductive. Our strong view is that the company as a whole responds much better to positive incentives. It is critical that the right "motivational model" is established. Creating the opportunity and positive incentives to outperform will deliver greater benefit particularly as outperformance can ultimately be reinvested in the railway or used to reduce future revenue requirements. It is important that in the Final Determination ORR signals clearly that the framework should continue to evolve and that it recognises that if it considers Network Rail has demonstrated that it is challenging itself, then ORR should be able to reduce the level of regulatory scrutiny.

There are well established principles of good regulation – transparent, accountable, proportionate, consistent and targeted and these were reflected in our proposed principles for regulation in Control Period 5. We do not consider the proposed regime meets these principles, and nor does it provide the right balance between regulatory oversight and the discretion for Network Rail to operate with the necessary flexibility to deliver the best possible outcomes for users and taxpayers.

We recognise the need for Network Rail to deliver key outputs while continuing to address the longer term capabilities of the business and this was reflected in our Strategic Business Plan. We therefore support the need for a confident regulator which will continue to encourage progress and challenge where necessary. Critically, however, we believe that the framework must be simplified to focus on what improvement is being sought. This will help us to empower our people more effectively to deliver these improvements. Although we recognise that the business is complex, there should be a consistent pressure to reduce rather than increase the number of key indicators.

We recognise that ORR wants to be confident that Network Rail has made further improvements before it reduces the extent of its monitoring. And we understand that its proposals for CP5 stem from its experience in CP4. But it is important that ORR signals its wish to step back so that our people understand that we need to increase the level of internal of scrutiny and challenge.

The volume of output, indicators and enabler measures being monitored in the proposed framework is extensive. ORR describes the Draft Determination as a package but ORR proposes to regulate each element of the package. In total, we estimate that around 3,700 measures will be monitored by ORR on a routine basis.

We agree that we need a broad range of measures so that we can effectively manage the business and we will certainly be using them to drive improvement. We also agree that we need to forecast and monitor performance across this broad range of indicators for each part of our business and that we need to be able to explain variances to ourselves and to ORR. However, we are concerned that over-zealous regulation by ORR of such a large number of measures will lead to an increased regulatory burden on the company and worse outcomes. It is important that there is not a presumption that actual performance will always be in line with forecast as this is unrealistic. It is important that ORR signals this in the Final Determination as it will influence Network Rail and ORR's behaviour in CP5.

ORR has proposed a significant number of new regulated outputs, indicators and enablers for CP5 including the regulation of key asset management activities rather than focusing on the regulation of outputs. As noted above, we recognise the importance of these indicators to the business and our stakeholders. However, we remain concerned that enablers and indicators such as those relating to underlying capabilities, whilst important, should not become a straight-jacket and that the focus should remain on the purpose or outcome which we are seeking to achieve. This is particularly important where specific plans need to evolve – for example, in the context of the asset management maturity model, the ultimate focus should be on what is necessary to enable delivery in CP5 (which will be monitored directly) and whether we are improving the robustness of our asset management plans for CP6 and beyond. ORR should recognise in its Final Determination that our plans will evolve.

At the moment there appears to be significant overlap of the measures proposed in certain areas. For example, asset knowledge improvement is a key element of the asset capability measure which overlaps with the measures proposed for asset data quality targets and ORBIS delivery. We consider that according these measures with the same status is disproportionate. In addition the level and granularity of some of the targets is inappropriate – for example, the required asset management maturity levels

are too ambitious and are too granular. There is also a good deal to do to define the asset data to which quality targets would be applied. While we will plan to deliver the required improvements, we are concerned that, if we are unable to achieve the required targets, we might miss three targets as a result of single underlying cause. ORR should therefore clarify the consequence of missing several targets where there is the same underlying cause.

We are also concerned this level of monitoring will lead to inappropriate behaviours. Although the framework distinguishes between measures that are subject to enforcement and those that are for monitoring purposes, we are concerned that in practice the measures provided will become the subject of routine scrutiny by the ORR and will potentially drive the organisation to treat all measures as fixed, formally regulated and enforceable.

The indicators required in the proposed framework include a significant volume of measures to be forecast and reported at a route-level. We clearly support greater transparency of route based information both to ORR and our customers in order for us to drive improvement. However, the reporting of measures at this level must not lead to ORR regulating Network Rail at a route-level. It is important that we have the flexibility to adjust the delivery of outputs and the allocation of resources across the routes to manage our risks efficiently. This means that we, as a minimum, need to be able to make annual adjustments to the actual results used in the REBS (reflecting significant changes in the business) subject to approval by ORR. The framework for engagement between Network Rail and ORR to review performance at a route level must not impose a further layer of regulatory engagement that duplicates the governance framework Network Rail uses to manage its business.

Output-based regulation

There is widespread consensus that regulation should focus on outputs rather than inputs so that the company can then achieve those outputs in the most efficient and sustainable way. This is clearly recognised in the current regime and the company therefore has the flexibility, for example, to reallocate expenditure between different asset categories, different years and different routes to achieve the required outputs. Even so, we feel that we still need to reinforce this understanding within Network Rail and to make sure that this principle is consistently applied within ORR. More critically, it is essential that if we are expected to deliver predetermined outputs, these outputs must be realistic, and the inevitable risk or uncertainty associated with the cost of delivering these outputs must be reflected in realistic expenditure projections.

Regulation of enablers

There has been extensive discussion about the regulatory approach to enablers in the context of output-based regulation and it is essential that we reach a common understanding of what this principle means in practice. We also recognise that other enablers (such as those relating to underlying capabilities and culture change) are important as early warning signs of potential future problems. In this context, we consider that maturity models from both within and outside the rail industry can be a useful business tool in driving change and that this can therefore provide the basis for productive dialogue with the ORR about these enablers. However, we maintain that these models should not become a straight-jacket and that the focus should remain on the outcome or purpose which we are seeking to achieve, particularly where specific intermediate plans need to evolve. For example, in the context of the asset management maturity model, the ultimate focus should be on whether we are doing what is necessary to enable delivery (which is monitored directly) and whether we are on track to produce a robust SBP for the next periodic review which ORR will be able to evaluate. In the context of safety, RM3 is one of a number of models which will make a useful contribution to our safety improvement, but none of these will guarantee delivery and a more outcome based approach as used by HSE is more appropriate.

Simplicity

The regulatory and contractual regime for the railway is relatively complex and the level of understanding of how this is intended to work is often poor. The tendency is for further complication to be introduced to deal with specific issues and it is rare for the arrangements to have been simplified. Our view is that there needs to be a strong pressure for simplification and clearer explanation focused on the purpose of what the relevant arrangements are seeking to achieve. This will help us to empower our people more effectively to deliver these improvements either directly or through improved partnerships with our customers and suppliers. An example of this is the proposed arrangements for Route Efficiency Benefit Sharing (REBs) which need to be based on clear simple principles, which is intended to allow sharing of all elements of route outperformance with our customers so that our people do not need to consider whether something is included or not. Although we clearly recognise that the business is complex, there should also be a consistent pressure to reduce rather than increase the number of key performance indicators.

Risk-based

A risk-based approach to regulation would focus regulatory attention on areas where it matters most and reduce unnecessary burden. An example of the implications of this is where there is a well developed plan which has the support of customers and other stakeholders, this would be subject to less scrutiny than would otherwise be the case. Ideally this approach would also place greater reliance on Network Rail's own assurance processes where these are deemed to be effective rather than duplicating these processes. There is an enormous amount of engagement between Network Rail and ORR and we believe there is a shared view that this is not always well targeted. We are therefore discussing with ORR how this can be improved through a more open dialogue about the key risks that the business is facing. A further example of this principle is the dialogue between Network Rail and ORR about a risk-based approach to the management of level crossings.

Avoiding duplication

One of the established principles of good regulation is around the need for a targeted approach. This implies that ORR should not seek to duplicate existing regulations. For example, where there are existing environmental, safety, employment or other requirements on the company, ORR should not seek to duplicate or add to these requirements but should focus on the efficient cost of these requirements. At the same time, the industry would expect ORR to help make the case to parts of government which might wish to impose additional requirements on the railway which duplicate its own requirements.

Train performance measurement

ORR states that there is only around 45 per cent confidence of achieving the HLOS PPM targets and 50 per cent confidence of achieving the HLOS CaSL targets. The regulatory outputs are disaggregated to individual TOCs established in JPIPs and at this level the confidence in achieving the individual targets can be expected to be even lower. In the Draft Determination ORR describes when and how it would intervene in monitoring train performance outputs. Given the increase in the number of output measures, there needs to be clarity about the appropriate trigger thresholds to avoid a risk of almost continuous intervention. All output measures are subject to statistical variability caused by random fluctuation and external events. This "noise" can be expressed as a tolerance when comparing actual values each year against a target. Some work was done on assessing tolerances in CP3 and we would like to review this with ORR in order to establish suitable triggers.

We consider the volume of indicators proposed for reporting in the Draft Determination to be excessive and burdensome. ORR has concluded that the following data should be reported each period:

- delay minutes, split by category (including Network Rail on TOC, TOC on self and TOC on TOC) for National, England & Wales, sector, Network Rail route and JPIP;
- PPM by sector and service group;
- CaSL by sector and service group;
- PPM and CaSL at TOC level (annual as an output);
- right-time performance by England & Wales, sector and JPIP;
- average lateness by England & Wales, sector and JPIP; and
- freight delay minutes, nationally and by strategic freight corridors.

Given there are in the order of 120 service groups we do not consider this volume of routine reporting to ORR is justified. This proposal also cuts across and is inconsistent the work of the National Task Force sub-group, mandated to devise an industry-wide plan for delivering greater transparency of performance data to meet the various stakeholder interests. The sub-group includes Passenger Focus.

The proposed measures in the Draft Determination have been discussed with NTF as part of the discussion on transparency of train service performance data. The key points from this discussion are:

- NTF does not consider sectors as a useful grouping for planning or reporting
- average lateness has never previously been published as a performance measure
- in line with previous advice from NTF, where applicable we would like to disaggregate to sub-operator (as currently) rather than service group
- disaggregating right time performance to service group is not robust given the concerns about data accuracy at that level of disaggregation
- CaSL has never before been published at operator and sub-operator level, and has not been raised in transparency or other context
- the impact of publishing the output of the JPIP process should be examined as there is a risk this could impact on the dynamics of the process and reduce its value as a planning process. There is also a concern about the volume of measures that could overload the JPIP process.

Asset management

ORR proposes a number of new regulated output measures relating to asset management, covering capability (measured by the Asset Management Excellence Model), asset data quality and ORBIS delivery milestones. We are wholly committed to achieving excellence in asset management which is one of our core strategic themes and is critical to meeting overall business objectives. Improving asset management capability and asset data quality are key enablers for improving the quality of our decision making and we are undertaking substantial complementary investment through the ORBIS programme to help achieve these objectives.

However, we do not agree that the proposed measures should be regulated outputs and consider that they form part of a regulatory regime that would be overly intrusive and complex. We consider it is appropriate to treat these measures as indicators as they are all inputs to the achievement of performance outputs and improved efficiency. There is a substantial degree of overlap between these measures, (for example, the ORBIS programme is a key enabler for improvements in asset data quality and decision-making which also form a key element of the AMEM capability scoring). There is therefore a risk of double or treble counting the same underlying issue within a number of targets.

There is a need to clarify the consequences of not meeting the targets, whether they are regulated outputs or indicators. It is necessary to understand these before reaching a final view on the status of the outputs.

There are some issues with the definition of each of the proposed targets which are set out below.

AMEM – asset management capability

We consider the continuing use of the independent AMEM process for assessing our capability improvement provides a valuable independent assessment of progress and support its use as an indicator. Part of ORR's justification for making AMEM scores regulated outputs is that "the pace of change [in CP4] has not been fast enough". In our view this does not reflect the outcome of AMCL's most recent assessment which clearly showed a substantial improvement in the pace of change since the IIP.

It is critical that the use of AMEM as an output indicator reflects the basis of the AMEM model and recognises the level of uncertainty around any scores. The AMEM process is based on interviews and associated evidence gathering and the certainty is partly a function of the extent of coverage. In our view, comment on previous AMEM assessments by ORR has not acknowledged this uncertainty and has presented some scores as a failure to meet a target when they have in fact been within the margins of error of this approach. AMCL have recently undertaken a study on the accuracy and confidence of the AMEM assessment process used for Network Rail. Initial results show that for a reasonably high confidence rating (80th percentile) the overall score may vary by +/- 1.5 per cent, while at individual group level within the model it can range by up to +/- six per cent. The AMEM model is also subject to change, and will be re-baselined in 2013 in line with the publication of the new ISO 55000 standard for asset management, which may affect our forecast trajectories through CP5.

We acknowledge ORR's objective for us to demonstrate that we are achieving excellence in asset management. If the AMEM score is to be a regulated output, the appropriate target should be an overall score based on the threshold for excellence as defined by AMCL (70 per cent), and recognising the emerging confidence range associated with the assessment approach. This will be challenging but deliverable through our existing action plans and continuous improvement in other areas.

A target substantially higher than that required to demonstrate to a reasonable confidence level that we have achieved excellence would represent unproven value for money and would not reflect the ambitious pace of change the whole business will undergo in CP5. It is important that the overall output framework incentivises the right behaviour. We need to focus on capability improvements that deliver the best overall business benefit in delivering a safe high performing railway efficiently, and not on activity to deliver the best improvement in the AMEM score.

We also question the rationale for having targets for each of the six activity groupings. The objective is for Network Rail to achieve asset management excellence, which should be captured by the single overall average score. We will however continue to measure, monitor and share results for each of the six activity groupings - as despite the broader confidence limits on the results this will help to demonstrate that we are continuing to improve the full breath of asset management capabilities.

AMEM-lite

We are discussing with ORR and AMCL how the proposal for an 'AMEM-lite' assessment of asset management capability in our route teams could be implemented and how this would relate to the core AMEM assessment. This is likely to involve a focus on a small subset of AMEM activities which are of greatest importance within the routes, with detailed assessment of all routes carried out. The core principle is that this 'lite' assessment must be useful to us in managing our business and driving meaningful improvements in asset management competence. Once the methodology has been agreed it will be necessary to establish a baseline set of scores on a route by route basis.

Asset data quality

Good quality asset data is important for effective planning and management of the business. However, we oppose the principle of asset data quality targets being regulated outputs and consider they should be indicators. Accurate asset information is a means to an end of delivering outputs efficiently, not an end in itself.

The Draft Determination does not provide a definition of the datasets to which quality targets would be applied, but indicates that the priority is for data to support our SBP for CP6. We cannot currently define with certainty the data that will be directly used in the production of the next SBP. This will be influenced by the ongoing development of decision support tools and future changes in asset policy that arise from continual review of the effectiveness of the existing regimes. Whilst we are developing a detailed proposal for the asset data definitions for discussion with ORR, these will be limited to our current understanding of the data requirements entering CP5.

If asset data quality targets are to be a regulated output then there clearly needs to be an objective definition agreed for the Final Determination. We consider the only workable definition in this timescale is to use the datasets identified as supporting the development of our SBP for CP5 that were reviewed by Arup in its data quality audit.

We are not clear why buildings asset data should be given a higher accuracy target. We understand that the rationale is that the Arup data quality audit scored buildings data (which only covers stations) as B1 and that ORR does not wish to set a target lower than current achievement. We note that the Arup audit qualified the '1' grading as not being robust given the small sample size and that the last annual return assessment rated the data for the station stewardship measure (based on much of the same data) as B2. We do not consider it is appropriate to set a differential target for buildings.

ORBIS milestones

The ORBIS programme is critical to the improvement in asset data and will enable efficiency savings to be delivered in CP5 and beyond. However, we do not consider that the ORBIS milestones should be regulated outputs, particularly if AMEM and asset data quality targets are also regulated outputs given the extent of the overlap noted earlier. Given the nature of the programme it would be more suitable to adopt the milestones as indicators, bearing in mind that there are expected to be further independent reviews of progress which will inform

ORR. We also note that ORR has assumed reductions in funding that may affect the precise scope and timing of the programme – funding and target milestones must be clearly aligned.

We have reviewed the milestone descriptions set out in the Draft Determination and made a number of amendments to try and remove ambiguity about the scope of each milestone. Our revised definitions are set out in the table below.

Milestone	Description	Date
LADS national roll-out complete	LADS will bring together disparate track data sources to enable NR to target work more efficiently.	May 2014
Handheld - fault and incident data capture app roll-out complete	The new app will allow maintenance staff to enter fault data into handheld devices and for this to be electronically transmitted to control centre staff	Aug 2014
Signalling decision support national rollout complete	SDS will bring together disparate signaling data sources to enable NR to target work more efficiently.	Sept 2015
E&P decision support national rollout complete	E&PDS will bring together disparate E&P data sources to enable NR to target work more efficiently.	Dec 2105
Ellipse replaces CARRS as the master system for civils	Asset hierarchies established and Ellipse designated as master system for Civils	June 2016
GEOGIS decommissioned	GEOGIS will be replaced by strategic Asset Management Platform systems	Dec 2016

ORBIS is a complex business change programme delivering a large number of projects over the course of CP5 and into CP6. It needs to retain the flexibility to adapt to changing business requirements and to manage delivery accordingly. Under ORBIS programme governance no change to deliverables or delivery dates can be progressed without undergoing the associated change control process and receiving the required authorisations. We therefore wish to see an aligned change control process for any of the key ORBIS milestones proposed by ORR in the Draft Determination as the programme should not be constrained to meeting these key milestone dates if there are clear and justifiable business reasons for not doing so.

Network availability

As requested by ORR we have included an updated forecast of the Possession Disruption Indices for CP5. We continue to refine our plans and will provide an update of these forecasts in our CP5 Delivery Plan.

There is significant uncertainty in forecasting the PDI measures at this stage. Many of the enhancement schemes are at an early stage of development and we will progressively confirm the delivery milestones for these programmes as the projects reach the appropriate level of development.

There is also uncertainty in the forecasting of the required possessions plans for renewals activity over the whole of CP5. More detailed possessing planning involves a rolling process which means the later years of the control period, in particular, do not have detailed possessions plans at this stage. Consequently we have used the proposed level of enhancements and renewals expenditure to approximate the level of possessions activity required during the control period to develop our PDI forecasts. As we make progress during CP5, it is likely that we will need to rephase some elements of our capital expenditure and this could also impact on our PDI forecasts.

At this stage we have excluded in the impact of third party capital expenditure on our PDI forecasts. The most significant exclusion from these forecasts is the impact of the HS2 programme, which will affect the level of disruption (as well as performance, capacity and journey time) on the LNW and Western routes.

We believe it is important that the PDI forecasts should be included within the change control framework for CP5 to allow us to maintain the alignment of these forecasts with other elements of our plan.

Further detail is provided in the supporting documents relating to PDI forecasts.

The approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures

Key points

We welcome ORR's proposal to focus on total financial performance rather than specific elements of expenditure or an efficiency measure. This represents the overall financial benefit to taxpayers and users.

We agree that we need to demonstrate that our reporting is robust in recognising savings in renewal costs. However, we do not consider that it is logical to insist that this should be conditional upon achievement of specific improvements in asset management or a specific confidence grading in unit costs.

The best possible outcomes for taxpayers and users are more likely to be achieved if we have the flexibility to deliver outputs in the most efficient way. We will continue to evolve our plans as we continue to identify more efficient ways of achieving outputs. It is important that ORR recognises there will be changes in the forecast indicators throughout CP5. In our view there should therefore be a presumption that savings represent efficiency improvements unless they have been achieved in a way which is demonstrably unsustainable or at the expense of other requirements. Otherwise the company will be incentivised to pursue the most easily demonstrable efficiencies rather than the greatest efficiencies. We consider that any requirement to demonstrate efficiency savings should be at a high level rather than based on a detailed explanation of positive management actions.

We agree that additional measures are required to explain variances in financing costs. We are concerned that reporting against the market could result in a situation where we will be seen to fail despite appropriate hedging. We will continue to work with ORR to develop appropriate measures.

ORR considers that it is not practicable to set out detailed prescriptive criteria for determining when and by how much a non-delivery of outputs would require a RAB adjustment. We have made proposals for a more predetermined and value-based mechanism that is akin to the approach being used for the current volume incentive. We would like to continue working with ORR to define where possible the approach to making such adjustments so that there is an agreed approach before the start of the control period.

ORR has suggested that outperformance should only be used to reduce debt or fund R&D. We propose to publish an update of our policy for use of outperformance in March 2014. Given the changes in the financial framework for CP5 we would expect to focus outperformance primarily on reducing debt or longer term investment in R&D. However, we do not consider that other uses of outperformance should be excluded as a matter of principle by ORR at this stage. Other areas where we might wish to use outperformance could include, for example, reinvestment of civils outperformance in further civils activity and additional expenditure at level crossings. Clearly we would only wish to use outperformance in this way where it is efficient and consistent with our purpose.

We have an established process of internal reviews for each business unit. We are, however, refining our proposals to clarify how the centre of Network Rail reviews performance of each business unit. We will work with ORR to develop a coordinated plan for engagement with the business both centrally and in the routes.

Measuring financial performance in CP5

During CP4 there has been continued discussion between Network Rail and ORR about the most effective way to measure financial performance. Given that decisions today can impact the long term costs of managing the network and the complex interaction between costs and outputs, the measurement of financial performance is not straightforward. However, we are keen to develop a better understanding between Network Rail and ORR of the approach to be adopted in CP5 before the control period starts.

We welcome ORR's proposal to focus on total financial performance rather than specific elements of expenditure or an efficiency measure. This represents the overall financial benefit to taxpayers and users. Measurement of overall financial performance should first be based on the variance between baseline and actual financial income and expenditure. This should then be adjusted, if necessary, to take into account the financial impact of Network Rail's performance in delivering the required outputs.

Income and expenditure variances

Network Rail's overall financial performance should be based on variances between the baseline (which would be ORR's Final Determination subject to agreed adjustments) and actual results. The variance analysis should be based on a "top-down" approach in which Network Rail would provide explanations of the differences (which would be derived at a high level rather than on a detailed bottom-up basis). Supporting analysis may be needed to provide evidence of the explanation.

In CP4 the requirement to demonstrate the underlying cause of any positive variances reduces the effectiveness of the regime. Network Rail is expected to prove that it has taken specific action to achieve savings and prove that it has had no effect on the future, which could lead to distortions in behaviour with Network Rail only seeking savings that could be validated. This approach is also unrealistic because the baseline in ORR's determination is

itself based on high-level assumptions and it is therefore not possible to identify specific causes for all variances to the determination. This burden of proof needs to change during CP5. The underlying principle should be that lower expenditure than the baseline is a good outcome while higher expenditure is a poor outcome unless this has adverse consequences for users or taxpayers.

In developing the explanation of variances, we would consider whether lower expenditure represents efficiency (i.e. savings compared to the baseline) or deferral of expenditure (i.e. changes in timing of expenditure that will result in an increase in future costs compared to the current expectation).

Similarly, we would consider whether higher expenditure represents inefficiency (i.e. additional costs compared to the baseline) or acceleration of expenditure (i.e. changes in timing work has been brought forward, for example to achieve an additional output).

The value of these savings should be consistent with the regulatory framework, with operating costs recognised at the value of the variance and capital expenditure valued on a basis that is consistent with the RAB treatment.

The explanation of the variance analysis will be critical. This needs to be based on good analysis supported by reliable data. But the assessment will also be dependent on the level of detail that underpins the baseline (which is inevitably higher level than the actual results) and an understanding of the impact on future costs which is inevitably uncertain. Therefore, while good underlying data is important, there will always be judgement required in the overall analysis.

Impact of output delivery on financial performance

Having completed the income and expenditure variance analysis, there then would be an assessment of whether there should be an adjustment to financial performance as a result of Network Rail's delivery of outputs.

Before making any adjustment, there should be an assessment to consider whether the variance is within a reasonable threshold to recognise natural variations in planning and actual performance. This is particularly important where there is no upside as a result of outperformance. While the volume incentive provides an incentive for outperformance, there should be further consideration of the incentive to outperform for outputs where there is no upside.

There are potentially two approaches that could be adopted. One approach would be to assess how much Network Rail should have spent in order to achieve any required output that it has not delivered. A second approach would be to assess the impact on stakeholders of missing required outputs and make an adjustment that reflects the impact on stakeholders (i.e. an approach that reflects the value that has been lost).

We do not consider that the first approach is appropriate as it implies that Network Rail should plan to spend any amount of money to achieve a required output. This would be unlikely to be value for money and would create a perverse incentive.

Adopting a value based approach would be consistent with Network Rail continuing to assess how to achieve the best value for money in balancing costs and outputs. Any adjustment would reflect the amount Network Rail should have spent to avoid impacting the value of outputs to its stakeholders.

Different approaches for calculating any adjustment would be required for different outputs. We consider the following approaches could be adopted:

- train performance. Adjustments could be based on the societal value of delay that was previously included within Schedule 8 benchmarks. A methodology could be developed that takes into accounts the relationship between PPM and delay that are reflected in the CP5 Schedule 8 benchmarks. The original societal rates varied for regional, LSE and long distance services and it should be straightforward to mirror this approach. It would also need to take into account the impact of both TOCS and Network Rail on PPM. The approach would be equivalent to the volume incentive based on a predetermined adjustment to the RAB (or opex memorandum account). We will explore with ORR development of a methodology for a predetermined level of adjustment using this approach;
- network availability. A similar approach could be adopted by applying societal rates to Schedule 4 costs;
- enhancements. Given the different nature of projects, bespoke adjustments would be required to take into account the impact on stakeholders of delays in completion of the project or failures to deliver the required scope. Adjustments would already have been made in the variance analysis to reflect agreed changes in scope and cancellations or delays in a project;
- enabling measures (such as the AMEM score). As these are not outputs, there is no obvious means of calculating the lost value or impact on cost. It is therefore likely that any adjustment would reflect some form of penalty, which could potentially be predetermined (subject to adjustments to reflect reasonable changes in our improvement plans);
- sustainable management of the network. Adjustments should reflect the impact of today's management of the infrastructure on future costs compared to current expectations. This is inevitably difficult as the effects of today's decisions will be felt over many years. This is explored further below.

Assessing the sustainability of asset management

A failure to manage the assets sustainably would mean that our actions today have caused the future cost of managing the infrastructure to increase compared to previous expectations (baseline) unless:

- there is a specific transfer from "today" to "tomorrow" (i.e. a planned deferral) that has no impact on costs before the deferred work is complete;
- something new has happened to change the previous expectations such as the impact of traffic growth.

A further indicator of unsustainable asset management is:

- a material reduction in the average remaining life of our assets compared to previous expectation (baseline);
- a deterioration in asset condition and reliability that is expected to continue into the future (rather than a short term variance that is not expected to last more than, say, a year).

Assessing whether the assets are being managed sustainably is complex and uncertain as it is based on a view of the future. The assessment of future cost should be on an overall basis not bottom-up, project-by-project. The assessment would need to consider each asset group (individually and then collectively). It would also need to take into account potential duplication with any other adjustments.

A shortfall in delivery of volumes should already have been considered when carrying out the financial variance analysis. If future costs increase as a result of current performance, then an adjustment should be made. For renewals, we need to consider the following:

- if there is an increase in future renewals, there should have been a reduction in the renewals baseline to reflect the deferral of activity. If there has not been, then there needs to be sustainability adjustments which should take into account the potentially lower cost of future renewals as we become more efficient;
- if there has been a deferral of renewals, there should be an assessment of the impact on future maintenance costs compared to previous expectations. The maximum impact would be expected to be based on the additional maintenance that could have been incurred in the period of deferral.

For maintenance, we need to consider whether there is expected to be an increase in maintenance costs as a result of today's actions. If an increase is expected, then maintenance savings should be treated as deferral rather than efficiency.

There should not be a presumption that under delivery of planned volumes will increase the future cost of running the railway but Network Rail needs to demonstrate that it understands the likely impact on future costs.

Subjective assessment

We appreciate that measuring financial performance is difficult, but we are concerned that the proposals for financial performance assessment remain subjective and complex. We believe that there is value to be gained from the experience of CP4. This causes uncertainty for us and other industry stakeholders, such as train operators who have raised concerns about the lack of certainty about how financial performance would be assessed and hence how they might benefit (or lose) from the Route Efficiency Benefit Sharing mechanism.

This point is illustrated by the length of time it took to derive a figure for the 2011/12 efficiency benefit sharing mechanism and the fact that the number moved within a large range. This uncertainty is also illustrated by recent ORR comments about large adjustments to the financial performance we have reported to date in CP4. We disagree with the principle of many of the adjustments and note that even if that was not the case, there is no clear or correct way in which the value of adjustment is assessed. The range of outcomes is significant.

Specific hurdles are too stringent

We do not agree that there should be specific hurdles, such as confidence grades for data quality or unit costs, such that a failure to achieve the hurdle results in no financial outperformance being recognised by ORR. We agree that appropriate data quality is important and are clearly striving to achieve that. However, we disagree that a specific grade has to be achieved in order to declare financial performance. We are also concerned that the assessment of the confidence grading itself is a subjective process and that ORR relies on a view from the independent reporter; in many areas we have not agreed with the reporter's assessment.

Other specific comments

Some adjustments have been made to 2013/14 expenditure for the purposes of determining ORR's CP5 efficiency assumptions. As these adjustments will not be made in calculating the actual reported efficiency in 2013/14, they should also not be made for calculating efficiency in CP5 so that there is consistency in long-term reporting of efficiency. We note that this means reported efficiency will not be consistent with the figures used in ORR's determination.

We agree that additional measures are required to explain variances in financing costs. We are concerned that reporting against the market could result in a situation where we will be seen to fail despite appropriate hedging. We will continue to work with ORR to develop appropriate measures.

The overall financial performance measurement for CP5 should include the volume incentive so that the full financial effect of traffic growth is reflected.

Overall financial performance measurement needs to take into account changes in accountabilities during CP5 such as transfers of station responsibilities between Network Rail and operators. This should be acknowledged in the Final Determination.

RAB roll forward

The RAB roll forward includes several references to capitalised financing costs but it is not always clear if the rate that should be applied is the real vanilla cost of capital (4.31 per cent) or the lower adjusted WACC. We would like ORR to clarify this in its Final Determination and suggest that the rates to apply are as follows:

- rescheduling our capital expenditure programme within CP5 whilst still meeting outputs. We should be held neutral to this and hence the capitalised financing should be based on the cost of financing that we received in the revenue requirement (i.e. the adjusted WACC);

- referral of work from CP5 to CP6 would result in a RAB reduction. This should include an adjustment for the financing costs we had received on the logged down amount and so in these situations should be calculated using the adjusted WACC rate;
- additional investments requested by governments and other funders in CP5, or additional Network Rail promoted investments (income generating and spend to save schemes). As these are additional investments over and above those funded through the PR13 determination, the normal real cost of capital should apply for the capitalised financing costs (i.e 4.31 per cent).

Debt to RAB ratio

During CP5 Network Rail will be exposed to a number of risks which if 'crystallised' could lead to significant increases in our costs. In the conventional regulatory model, regulated companies are expected to manage these risks through the periodic financial settlement. The way that this is done is by providing a risk buffer in the company's allowed financial return. As ORR has decided to depart from this conventional approach and not provided Network Rail with a P&L risk buffer in CP5, the only way that we will be able to accommodate increased costs from any of the risks we face materialising is through additional borrowing (a balance sheet buffer). In CP4 ORR placed a licence restriction on Network Rail borrowings. It expressed this limit in terms of a maximum level for the ratio of our debt to RAB. As ORR is not providing a conventional P&L risk buffer in CP5 it is vital that it does not preclude Network Rail from borrowing sufficient funds to handle the financial effects of foreseeable risks occurring.

We continue to stress the importance of sufficient balance sheet headroom and the need to consider this in the context of longer term sustainability of the funding model. We consider that we require five per cent above the debt to RAB ratio forecast in our draft CP5 Delivery Plan to be able to manage the potential additional costs of business risks 'crystallising' during CP5. This is consistent with the risk analysis previously provided to ORR which demonstrated that there are operational and financial uncertainties that the business will face in CP5. As part of our response we have updated this analysis and it has been provided as a supporting document. However, we do not believe that, for CP5, the appropriate level of the debt to RAB ratio can be considered in isolation from other measures of financial sustainability. We believe that it is necessary to consider different metrics for different purposes. Considering these different metrics suggests that a debt to RAB ratio of over 75 per cent would not be problematic. This is because, for example, the ability to withstand operational shocks is more closely related to the absolute level of equity; and the ability of funders to afford future RAB payments is more closely represented by the ratio of the RAB to farebox. The suite of metrics that we consider provide a suitably broad range of measures of our financial sustainability is included in the annex.

Route Efficiency Benefit Sharing mechanism

It is important that the measurement of REBS performance is consistent with the general approach to measuring Network Rail's financial performance. For this reason, we are concerned by one of the options that ORR put forward at its July workshop for dealing with the non-delivery of outputs, suggesting that the measurement of REBS performance could exclude any output adjustments that ORR may make to Network Rail's total performance measures. We consider that this would be inconsistent as we would be sharing a higher level of efficiency through REBS than ORR considers we had achieved. At the workshop, ORR also included a suggestion that the criteria for financial monitoring of Network Rail could include stakeholder approval of performance measures. ORR considered that feedback from stakeholders could help assist its financial monitoring of Network Rail. We are concerned that this proposal may not be practical. We will continue to discuss these issues with ORR.

Further detail is provided in the supporting document relating to our borrowing headroom.

The investment framework should support a broad range of opportunities including efficiency, safety and R&D

Key points

We welcome ORR's aim of clarifying the mechanism for funding incremental investment that delivers future cost savings. We have continued to work with ORR to develop the mechanism further. We consider that it is important that the Final Determination broadens the scope of the framework and adjusts the values that will be logged up to the RAB so that they are sufficient to incentivise investment which ultimately benefit users and taxpayers.

The scope of the framework should be extended to cover all investment that enables improvements in the cost of operating, maintaining, renewing and enhancing the railway. This includes investment in safety, wheeled plant and corporate offices.

It needs to be clear how the proposed mechanism will be applied to investments that are justified on non-financial benefits such as improvements in safety. We propose that ORR should treat these in the same way as investments that deliver incremental outputs, with the full investment being added to the RAB subject to approval by ORR.

The proposed investment mechanism assumes that we will achieve efficiency savings of five per cent in each year of the control period including the year in which the investment is completed. However, there is usually a lag before savings start to be delivered and we consider it is important that this is recognised in the framework so that there is an incentive to deliver further investment to achieve further benefits.

ORR also needs to consider how this mechanism interacts with the rolling treatment for investment that delivers benefits in renewals and enhancement savings. This needs to be clearly understood and taken into account in the measurement of overall financial performance.

We are concerned by a number of specific investment proposals included in the Draft Determination. ORR has included an allowance for capital expenditure relating to incremental property income that was previously funded through the investment framework. These projects are highly uncertain and are based on forecasts that are higher than have previously been achieved. It is unclear how the income and expenditure will be treated in the assessment of overall financial performance. We consider these should be treated as assumptions for the purposes of determining the revenue requirement and not as targets.

We support the principle of the civils adjustment mechanism and agree that it is an appropriate way of recognising the level of uncertainty around the efficient level of activity and expenditure. We will continue to improve our understanding and management of civils and our plans will continue to develop during CP5. As a result, it is likely that there will be changes in the specific projects included in our plan, including the balance of activity between routes.

Further investment is required to continue to reduce risks at level crossings. Safety is our number one priority. The GB railway is one of the safest in Europe. However, risk at level crossings remains one of the biggest safety risks. In CP4 we have so far reduced risks at level crossings by 25 per cent. Building on our proven delivery record in this area, exploiting new technology and opportunities to coordinate with strategic projects, we will continue to develop our analysis and consider that investment of £120 million in CP5, including the £77 million already provided by government together with the ongoing investment included in our renewals programme, could deliver a reduction in risk at level crossings of 25 per cent.

Network Rail's success relies on highly technical and complex systems engineering. The future demands on the railway will challenge the limits of our current technical approaches. Innovation is key to meeting these challenges. Following the publication of the Rail Technical Strategy for the industry, Network Rail has published more details on its strategy to support the industry in this area. We are continuing to work with the Rail Delivery Group and Technical Strategy Leadership Group to progress our plans and to make sure that these are fully integrated.

We welcome the inclusion of £50 million for R&D and we assume that this is in addition to the funding currently provided through RSSB. We have been having constructive discussions with ORR about our proposals for prioritising investment and for how the matched funding approach should work. We consider that funding should not be limited to £50 million if strong business cases can be established as this would constrain the potential for future benefits to users and taxpayers. Significant investment in R&D is required if the industry is to continue making significant improvements in the long term and the investment framework needs to allow further investment opportunities in R&D where there is a business case to do so.

ORR's view

ORR is proposing that the "internal/Network Rail" part of the investment framework is replaced by an amended approach to the RAB roll forward process (using different incentive strengths) to deal with spend to save schemes. The policy is proposed to cover Information Management schemes that improve the business and income generating schemes.

The change is proposed because the existing internal/Network Rail investment framework has the effect of not incentivising Network Rail to invest in schemes that could reduce the cost of the network as the RAB addition is determined by netting off the savings from the capital investment.

ORR has proposed a civils adjustment mechanism which will result in Network Rail being measured on delivery of activity volumes rather than demonstrable asset management of the civils assets. A further review of the required volumes for the final three years of CP5 by ORR is proposed in March 2015.

ORR has included £50 million for R&D expenditure and has proposed a development of a framework which would require Network Rail to obtain matched funding. ORR has asked us to develop more specific proposals.

The spend to save scheme mechanism

We welcome ORR's wish to clarify funding of incremental investment and to improve the incentives. We have concerns about the proposed scope of the revised mechanism, the baseline assumption for investment (and the related efficiency or revenue) that is included in the Draft Determination and the proposed adjustment values to be used in the mechanism. The Draft Determination also does not consider treatment of investment that delivers non-financial benefits. Since publication of the Draft Determination, we have had some useful discussions on the approach to spend to save schemes and we will continue to work with ORR before publication of the Final Determination.

Scope of the mechanism

ORR has proposed that the scope of the spend to save mechanism should apply to Information Management schemes that improve the business and income generating schemes.

We propose that the scope of the framework should be extended to cover all investment that enables improvements in the cost of operating, maintaining, renewing and enhancing the railway. In our SBP, we separately identified this expenditure. This included wheeled plant, corporate offices and safety schemes as well as Information Management and property revenue generating schemes.

Our proposal to extend the framework to cover all investment is based upon evidence from CP4 schemes that have been implemented. For example, we have undertaken the design and build of a concrete sleeper factory to lower the unit cost of concrete sleepers to Network Rail. Other schemes include the route operating centres and the national centre in Milton Keynes which will deliver reductions in operating expenditure.

We consider the framework should provide an incentive to deliver further investment where it enables further savings beyond the CP5 targets and to deliver savings as early as possible in CP6. Although we can plan for investment in many areas, there are instances where the market conditions change which lead to excellent and sometimes necessary opportunities for investment that were not previously foreseen. The investment in the concrete sleeper factory was made due to suppliers leaving the UK market due to a decline in market demand. This forced Network Rail to use more expensive European suppliers when market conditions improved again. Additionally, many schemes are in the very early stages of development and have a high risk of non-delivery due to uncontrollable factors such as planning permissions. As a result we are unable to plan for every scheme this early.

We recognise that we need to identify that investment is incremental to a baseline level of expenditure that is included in the Draft Determination. We believe that this investment will generally be for specific projects that should be separately identifiable from activities that we have included in our plan. For wheeled plant, our plan already includes both management of existing plant and purchase of new plant to support delivery of the activities and savings in the SBP. We would need to show that purchase of further plant is incremental to our existing plans and supported by an appropriate business case.

We welcome ORR's proposal to amend the baseline where we decide to switch between owning and leasing assets. This should reduce the likelihood of incremental investment for corporate offices.

Setting the baseline

We explain in the section on IT expenditure later in this response, that we do not consider sufficient expenditure on IT investment has been included in the Draft Determination to support the savings that are required throughout our plan. While we welcome ORR's recognition that it is difficult to forecast IT investment in detail more than five years ahead, we are concerned that the framework would mean we need to achieve further savings from investments that should have been in the Draft Determination.

We also explain in the property section below that the level of investment included in the Draft Determination is not consistent with assumed property revenue. If the baselines are not set consistently and at achievable levels, we will be unlikely to achieve the ORR assumptions and there will be no incentive to achieve further growth.

It is important that the baseline expenditure for items included in the framework is consistent with the broader assumptions in the Draft Determination so that there is a complete package.

Proposed adjustment values

ORR proposes to reduce the capital expenditure logged to the RAB by 25 per cent in the first year of CP5, scaling down to five per cent in the final year. This is intended to create a simple mechanism for reflecting the incremental efficiency (or revenue) that will be achieved from the incremental investment.

We welcome the proposal to use a simple adjustment mechanism. However, we are concerned that the proposed reductions do not reflect the timing and scale of savings that could be delivered by incremental savings. The proposed investment mechanism assumes that we will achieve efficiency savings of five per cent during the year in each year of the control period including the year in which the investment is completed. This is approximately

the same as five years allowed return at 4.31 per cent (the PR13 cost of capital). For most investment schemes there is a lag between when the investment was undertaken and the commencement of the financial savings. The proposed adjustments do not recognise this lag. The mechanism also does not recognise that investment may be incurred over more than one year. The mechanism would effectively require savings to be recognised before the project is completed. We also note that ORR intends to reduce the cost of capital to 4.31 per cent which means that there may be incremental investment that have a good business case that deliver 20 per cent (rather than 25 per cent) savings over a five year period.

We therefore propose that the value used in the adjustment mechanism should reflect these issues. We are particularly concerned that there is an incentive for incremental investment at the end of the control period (this is similar to early start funding for CP6). The table below summarises the proposed changes.

Per cent	2014/15	2015/16	2016/17	2017/18	2018/19
DDs adjustment	25	20	15	10	5
Lagged adjustment	20	15	10	5	0
Lagged and reflecting revised WACC	16	12	8	4	0

We note that this proposal does not address the concern about expenditure straddling more than one year. It also does not consider the secondary effect caused by the rolling RAB mechanism on capital expenditure savings which means that much higher savings would be required to achieve a positive business case. This should be taken into account in our overall financial measurement.

We are also discussing with ORR whether there should be modifications to this approach for property in order to recognise the uncertainty in the baseline figures included in ORR's determination.

This adjustment would mean that investments would still be worth making in the final year of the control period. The capital investment would be included in the RAB, and the future savings would be incorporated into the efficiency benefits for the following control period. We recognise that there would need to be an appropriate process in place to manage this investment, particularly in the final year of the control period.

An alternative approach would be to treat the allowances in the Draft Determination as assumptions for the purposes of determining the revenue requirement and not as targets. We would not be able to outperform by spending less, but we would want ORR to agree that if more "good" schemes are identified then the expenditure can be added to the RAB following ORR approval in the normal way

Investment that delivers non-financial benefits

The Draft Determination does not explicitly mention how the mechanism would apply to schemes that deliver non-financial benefits, including safety schemes. We propose that schemes generating non-financial benefits, such as safety schemes, are treated as emerging enhancements, using the current investment framework, in the same way as investments that deliver incremental outputs, with the full investment being added to the RAB subject to approval by ORR.

Civils

We welcome the de-risking of the civils portfolio through the use of the civils adjustment mechanism. This reflects appropriately the uncertain nature of much of the historical asset information for structures, and the high degree of difficulty involved with assessing the condition of the asset base. We agree that the SBP could have been clearer on our plans for the civils portfolio, however we disagree with some of the issues identified by ORR for making reductions to spend, most notably the reduction of earthworks expenditure on grounds that are mostly related to the structures portion of the submission.

Structures

We do not agree that contingency has been included in our cost estimates. Structures unit rates are drawn from the Cost Allocation Framework (CAF) which reports actual/final cost data and contains no provision for risk or contingency, and hence none has been included within the rates. Route Asset Managers have based non-unitised costs on sound knowledge of work scope, local constraints, local access and historical cost data for similar works.

We do not agree that preliminary costs are disproportionately high for civil engineering works of this nature. The example used by Arup was Underbridge:Metallic:Preventative (grit blast and paint). This element incurs demonstrably high preliminary costs due to the scaffolding and encapsulation requirements.

Earthworks

Whilst we welcome the de-risking provided by the civils adjustment mechanism, we consider that the expenditure allowance for earthworks should be evaluated separately from that of structures. The reasons for the reductions to civils spend identified in the Draft Determination largely refer to the structures element of the submission and not to earthworks. Indeed, the earthworks unit rates were judged by the Independent Reporter as being of good quality, were rated the joint highest of any asset, and form 87% of the earthworks expenditure.

Of the seven issues identified in the Draft Determination that resulted in the five per cent reduction for the first two years of CP5 (and 10 per cent in the next three years subject to the application of the civils adjustment mechanism), only two have any applicability to earthworks.

The first relates to inconsistency in the inflation indices applied to historical costs. It is true that by year, different inflators were used for earthworks than for structures. However, we do

not consider this to be material because the annual averages over the whole of CP3 and CP4 for the inflators (as calculated by Arup in its report on unit costs), were 2.89 per cent for earthworks and 3.08 per cent for structures. This suggests at most an impact in the region of 0.2 per cent.

The second relates to the representativeness of the work mix to CP5 and the effect this has on unit costs. We consider that this comment only applies to the drainage element of earthworks (as raised in Arup's unit cost report). The assessment of drainage unit costs carried out for the SBP considered all 12 drainage asset types and all five intervention types that are represented in the CP5 drainage policy (i.e. 60 possible combinations of asset/intervention type were assessed). However, over 50 per cent of the CP5 modelled drainage cost comes from only two asset/intervention type combinations (i.e. renewal of pipes, ditches and channels), and over 90 per cent of the CP5 modelled drainage cost comes from just 12 asset/intervention type combinations. This CP5 mix is similar to the CP4 drainage works mix, and is reflected in the fact that the majority (over 65 per cent) of the CP4 drainage unit cost data available from all sources (CAF, Monitor and Ellipse) covers the same limited mix of asset and intervention types. We are therefore confident that the assessment of CP4 drainage unit costs is fully representative of the planned CP5 drainage works.

Whatever residual uncertainty in unit rates results from the work mix, we consider the materiality to be very small. Earthworks drainage only accounts for about 25 per cent of the earthworks component, and only six per cent of the civils portfolio as a whole.

We therefore consider it appropriate that the five and ten per cent reductions made to the civils portfolio are not applied to the earthworks element of the expenditure.

Civils adjustment mechanism

We will continue to improve our understanding and management of civils and our plans will continue to develop during CP5. As a result, it is likely that there will be changes in the specific projects included in our plan, including the balance of activity between routes.

Rollover from CP4 to CP5

We understand that ORR has agreed to use our latest forecasts for 2013/14 expenditure in its Final Determination and to reflect rollover in the CP5 projects as appropriate. We welcome this and will work with ORR to provide forecast updates in sufficient time for these to be used. We consider the overall purpose in agreeing appropriate rollover is so that for projects that span the two control periods there is no artificial incentive or disincentive to spend the money in any particular year. Thus for example, for enhancement programmes that have gone through change control or are about to go through change control, we think it makes sense to reflect the latest expenditure profile in the ORR determination. Other than in a few specific cases agreed with ORR there would not be rollover on capped funds. The final outturn for the year will be considered by ORR and NR around May/June 2014 and we envisage that for capital expenditure this will be used to agree the closing CP4 RAB and for non controllable operating costs and incentive payments this will result in agreements for amounts to be included in the CP5 opex memo account.

We will separately provide ORR with analysis of the potential rollover of expenditure from CP4 to CP5.

Further investment is required to continue to reduce risks at level crossings

Although we have made significant progress with addressing level crossing risk in CP4, new technology and new organisational capability developed in CP4 means we now have an improved case for further investment to reduce the risk at level crossings. This means that an opportunity exists in CP5 to build on the progress already made in CP4.

We now have new technology available that was not available at the start of CP4, which means we are able to develop new solutions with a reduced cost of risk reduction. This in turn results in better value for money. A key example of this is the development of lower cost footbridges used to close a number of the 706 level crossings removed from the network since 2009.

In addition, our proven ability to deliver in CP4 means less project risk allowance will be required in CP5, resulting in a further improvement in value for money.

In CP4 we have also delivered a new national operating regime to improve organisational capability, introducing over 100 dedicated level crossing managers. New training, mentoring, coaching and professional development plans have been designed and delivered. New business processes have also been introduced along with mobile working and system integration to provide greater enablers to this new community. These changes to the business will be embedded in CP5 and as this happens there is a significant opportunity to further reduce risk and improve asset management in this critical area. This includes capitalising on the 'once in a generation' opportunity to use new technology and solutions, and our embedded organisational expertise to improve safety at level crossings as we undertake the many key strategic enhancement projects in CP5, such as the Great Western Electrification project.

As well as continuing to focus on day to day risk management at level crossings, we have been carrying out further work to assess the benefit of further investment to reduce risk at level crossings. We currently consider an investment of £43 million in CP5, which combined with the £77 million already provided by government, could lead to a further risk reduction of 25 per cent, in line with the risk reduction made in CP4. We will continue to develop our analysis and assume this will be funded through the investment framework.

We would use this funding to:

- close the highest-risk unprotected crossings, particularly crossings used by farm vehicles and footpaths across high-speed lines, as well as crossings in close proximity to an alternative access over or under the railway;
- continue to close other crossings to eliminate risk when the opportunity to remove them from the network arises at an affordable cost;

These actions will address the highest risk crossings in the All Level Crossing Risk Model and the major precursor indicators identified in the RSSB Safety Risk Model and the Precursor Indicator Model.

Investment in R&D is key to improving the long term productivity of the rail industry

Network Rail's success relies on highly technical and complex systems engineering.

The future demands on the railway will challenge the limits of our current technical approaches. Innovation is key to meeting these challenges. In response to the publication of the industry Rail Technical Strategy (RTS) the Network Rail Technical Strategy (NRTS) has now been published. The NRTS details how Network Rail will support the industry in achieving the vision set out in the RTS. The NRTS sets out the challenging journey to transform our technology and innovation capability that will be achieved through the enablers of people, innovation and governance processes and collaboration needed to make that happen. Our proposal to generate value from the R&D Fund – currently referred to as the Matched Fund in the Draft Determination – places a heavy emphasis on improving our technology and innovation capability.

Collaboration starts with ensuring there is alignment between Network Rail and industry. The NRTS sits within the framework of the industry RTS and we are working closely with the rest of the industry to ensure these strategies are implemented in an efficient and integrated way. This includes participation in the current review of industry governance and oversight of technology.

A portfolio management approach will be applied to the treatment of risk, return on investment and to achieve a balanced delivery of Network Rail and industry outcomes. An integrated governance approach for Network Rail and the wider industry will enable engagement with, and acceptance of, all projects under the R&D Fund.

We propose the R&D Fund is controlled through a stepping up of funding with maturing capability. This will enable an appropriate level of investment throughout the control period as our technology and innovation maturity increases and the potential benefits are further articulated. We will measure our technology and innovation capability maturity using internationally recognised best practice.

We propose the R&D Fund is evaluated based on:

- our ability to leverage appropriate co-funding arrangements with the provision of co-funding from third parties an outcome and not a precursor to us investing in R&D;
- the maturity of our technology and innovation capability and programme; and
- demonstrating effective governance.

Funding and leveraging appropriate co-funding

We consider that funding for the R&D Fund should be provided by means of the existing RAB addition policy set out in the ORR Investment Framework that has proved to be an effective and transparent mechanism. The RAB addition criteria would usually apply to discrete projects but assessing individual projects would be cumbersome and inefficient and so we suggest that ORR's assessment is at a portfolio level. We also understand that ORR does not want to be involved in "picking winners" and is more interested in making sure the governance processes are effective. We agree with this and therefore suggest that the assessment of the RAB addition is not based on a specific analysis of the costs and benefits of a particular portfolio but rather the effectiveness of the governance and administration processes.

There clearly has to be adequate control on the overall level of matched funding and so we can understand why ORR has suggested a cap on the R&D Fund of £50 million. However, the above approach coupled with the reporting and evaluation arrangements we propose below provide suitable controls. Therefore we think it is better to avoid a fixed cap and instead to consider all R&D portfolios on their merits in terms of risk and return on investment.

We propose leveraging co-funding from third party funding rather than our own outperformance to ensure stability of funding for a plan that offers long term benefits. It is not realistic to assume that we will be able to outperform and it is unlikely that we would be able to commit outperformance to R&D until we are at least half way through the control period.

In our view the provision of co-funding from third parties should be an outcome and not a precursor to us investing in R&D. This is because we already have strong incentives to secure co-funding from others and there is a danger that a requirement for co-funding will stifle worthwhile opportunities. Co-funding should be assessed at portfolio level so we can obtain matched funding through the RAB as a result of securing investment from others in different areas. This would also include situations where we are able to influence spending priorities of other organisations rather than being limited to securing cash to spend on directly managed R&D.

Maturity of our R&D capability and programme

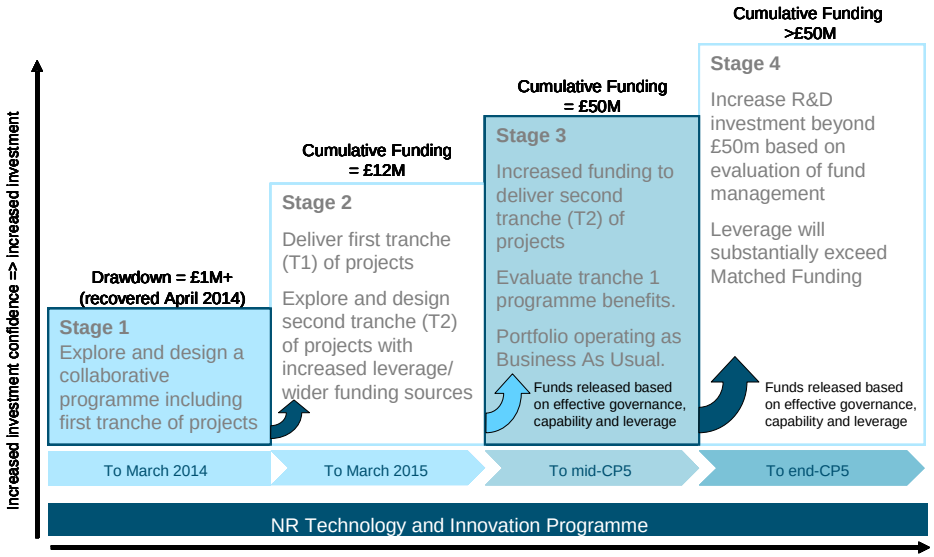
In order to control the investment in R&D alongside the challenge of increasing the maturity of our innovation capability (recognised in the NRTS and industry technical strategies), we propose four stages of increased investment from the R&D Fund over the Control Period. The four stages of investment are shown in the figure below.

The four stage approach will generate increasing value from investment of the R&D Fund. It will control investment in step with good governance and administration. The stages will progressively:

- increase the value of R&D through maturing capability;
- increase the leverage from the R&D fund through co-funding; and
- use reporting to trigger an increased level of investment by the success of each stage.

Investment control points shall be aligned to each stage; reports shall be produced at the end of one stage to release the subsequent stage's funding. The reports shall detail the efficacy of the governance and administration arrangements and the verification of the previous stage's maturity and leverage objectives.

Further details of the four stages of investment are included in a separate supporting document.



Proposed programme development

Regular scrutiny of progress will be achieved through the routine oversight by the industry technology governance group – currently the Technical Strategy Leadership Group (TSLG).

Projects would be eligible from the R&D Fund to the extent that:

- sufficient benefits are not available within CP5 to create a business case
- the business case delivers whole industry benefits rather than benefit Network Rail's business independently
- the project involves a level of risk of not leading to an implementable solution that would mean the project would not be undertaken as business as usual
- the project has not already been funded elsewhere in our CP5 proposal or funded through the HLOS Innovation Fund.

Demonstrating effective governance

An integrated governance approach for NR and the wider industry

The R&D Fund sits alongside the Development and Innovation Fund of which £52 million was proposed in the Strategic Business Plan and agreed by the Planning Oversight Group to be allocated to innovation (the Innovation Fund). The R&D Fund and the Development and Innovation Fund are complementary, but separate. We support both being governed through the same Network Rail and industry groups to achieve an efficient integrated R&D programme. In this way we are progressing towards solutions that will deliver whole system improvements and offer benefits that add to the economic value of the railway.

Internal governance will be achieved through a Technology and Innovation Board within Network Rail together with broader governance, engagement and collaboration with industry through TSLG. These governance mechanisms will ensure that R&D Fund projects are genuinely new opportunities and not business as usual. Projects will be developed as part of wider portfolios that will include projects funded through other mechanisms including funded through other Network Rail mechanisms through the Development and Innovation Fund, RSSB R&D funding, funding from the Technology Strategy Board including the Transport Systems Catapult; Engineering and Physical Sciences Research Council; and EU research funding.

The accountability for individual projects will fall to Network Rail or industry governance boards on a case by case basis with appropriate reporting and accountability to funders. Financial authorisation for R&D Fund projects will be via a Network Rail Investment Panel.

This would be supported by routine progress and expenditure reporting and an annual review of the programme, to re-validate business cases, and to assess project progress/achievability. Where necessary, projects will be stopped if business cases deteriorate markedly and/or the chance of success reduces to the extent that the potential prize does not warrant the level of assessed risk.

A portfolio management approach

We are reviewing best practice R&D management from other industries and lessons from the establishment of the RSSB R&D pipeline and the creation of the Enabling Innovation Team for the Pilot Innovation Fund. We are working increasingly closely with RSSB to ensure that our respective programmes are aligned. We will apply portfolio management to the treatment of risk and to return on investment including the impact of leverage from co-funding opportunities. We propose there is no fixed definition of an appropriate source or sources for co-funding; co-funding will be sourced to reflect the risk and opportunity profile specific to each project.

Portfolio management requires new governance processes to be designed and implemented and different attitudes and expectations to project delivery which differ from our typical investments in enhancements and renewals. This capability work has commenced and will support the first tranche of R&D projects.

We will balance the delivery of NR business and industry objectives which are well aligned. Projects supported by the first tranche of the R&D Fund will be skewed towards the NRTS emphasis on R&D to support safety, cost efficiency and customer experience enhancements in the short term and traffic management for capacity enhancements in the longer term.

A fully resourced prioritised programme integrated with industry

During stage 1 the relationship between the Development and Innovation Fund and the R&D Funded programmes will be clarified and the programme will also be clearly related to other R&D activities within the company, building on the Network Rail Innovation Dashboard. The programme will be developed from the NRTS by applying prioritisation criteria to identify candidate projects which will include consideration of strategic fit, deliverability, confidence, exploitation potential and return on investment. Those projects will then be assessed by taking into account their fit together as a portfolio. During this time we will collaborate closely with TSLG and with potential matched funders including the recently established Catapults (with particular emphasis on the Transport Systems Catapult), The Highways Agency, the UK research councils, and European research funding bodies.

Investments from the R&D Fund will form part of a fully resourced, prioritised programme that is integrated with the rail industry. We also expect to undertake some projects outside of the rail industry. Funding will (by definition of the R&D Fund) come from multiple sources and may include in-kind contributions. All contributions will form part of a declared resource plan; committed resourcing is vital to ensure a stable delivery environment for the R&D.

Further detail is provided relating to our R&D programme.

The capacity and performance framework is inconsistent and potentially inflexible

Key points

The framework for performance outputs is unclear and incentives are inconsistent. The Draft Determination sets out trajectories for CP5 that deliver 92.5 per cent PPM MAA by the end of CP5 and 2.2 per cent for CaSL in England and Wales. In the Draft Determination ORR acknowledges the challenging nature of these targets and assesses the level of confidence in delivering these outputs as 45 per cent and 50 per cent respectively.

This implies that that there is a more than 50 per cent chance that we will not achieve the performance targets. ORR therefore needs to set out more clearly in the Final Determination the consequences of failure to achieve the target. The regulatory framework must recognise that this level of confidence means that half of the time we are as likely to miss the target as achieve it, and that missing the target should not therefore be regarded as unacceptable (and therefore requiring regulatory intervention) provided that we have taken all reasonable steps to meet it in what would be regarded as normal circumstances. This should not, however, be taken as indicating a lack of ambition within the business to drive performance to the best possible levels. The reputational and financial penalties for delivering performance below target far outweigh the benefits of outperformance under the current framework.

The target of 92.5 per cent must not therefore be considered a minimum threshold in regulatory terms. This would require us to plan to meet a significantly higher level of performance that would be inefficient and poor value for money. In the SBP, we explained that there is a significant range of uncertainty in forecasting the precise level of performance, which means that we expect to deliver within a range from 91 to 93 per cent PPM by the end of CP5. Our latest forecasts indicate that it is highly unlikely that we will achieve the CP5 PPM trajectory in the Draft Determination in the early years of the control period, reflecting for example the impact of the disruption caused by engineering works. We have separately provided our latest analysis of the CP5 PPM trajectory.

The Draft Determination sets a minimum target for all train operators of 90 per cent PPM MAA by the end of CP5. It is the collective concern of National Task Force that setting a minimum threshold could constrain the industry and not deliver value for money. Individual operators have also stated they consider that 90 per cent is an inappropriate level of PPM to target for franchised long distance operators. Informed by our discussions with operators we consider a more appropriate target for those operators is 88 per cent PPM by the end of CP5 with potential lower daily variability.

It is critical that there is alignment between the outputs required of Network Rail through the periodic review and the outputs of train operators specified in the refranchising process. We will not deliver the required network level performance outputs if this alignment is not achieved as train operators must continue to contribute to the improvement in performance to levels specified in the periodic review. Where operators are required to deliver a different level of performance then there must be flexibility to adjust the required level of performance delivery from Network Rail, either at an operator-level or a network-level where appropriate.

The industry has also proposed that to make the right trade-offs between outputs to make best use of the network, there should be flexibility within the regulatory framework to adjust the regulated outputs. While we welcome ORR's proposal to introduce a change control mechanism that would apply to franchise specification changes, we consider this proposal is too narrow. The mechanism needs to be broadened so that we have greater flexibility to deal with unexpected growth or other external changes.

A closely related issue is the Schedule 8 performance regime. Passenger Schedule 8 payment rates, which compensate train operators for lower than planned levels of performance, are to increase significantly in CP5. This should strengthen the incentive on us to minimise service disruption. It is important that the rates are set at the right level for Network Rail and train operators to manage performance and capacity efficiently and make the right trade-offs. There are also financial impacts, that if the rate is set inappropriately, could represent unacceptable risks to train operators, funders and Network Rail and would also send incorrect price signals to the industry including disincentive to growth. We consider the proposed rates for the London and South East commuter flows to be contrary to the empirical evidence. For other markets, the empirical evidence is not sufficiently conclusive to form the basis for such large financial flows.

It is important that Schedule 8 benchmarks are set at realistic levels, which 'line up' with the regulatory performance trajectory in the Final Determination and ensure that the regime is financially neutral when regulatory targets are achieved. Our analysis indicates that there has been a mismatch between the regulatory performance targets and Schedule 8 benchmarks during CP4. This has resulted in additional Schedule 8 costs for Network Rail in excess of £100 million in CP4 (and this would increase with the proposed increased rates in CP5). We welcome the constructive engagement between train operators, Network Rail routes and ORR in developing a robust methodology for 'translating' PPM targets into Schedule 8 benchmarks for CP5. We believe that this will help establish a more robust set of Schedule 8 benchmarks for CP5. We expect the final set of Schedule 8 benchmarks to be updated once

the CP5 regulatory trajectory is finalised as part of ORR's Final Determination.

The capacity charge is intended to offset the additional Schedule 8 liability from accommodating incremental traffic on the network. The Draft Determination suggested consideration of a potentially different approach in CP5, in which the capacity charge and Schedule 8 regimes would use different payment rates. If this approach was adopted, it would mean that the increased Schedule 8 liability from traffic growth would only be partially offset by the capacity charge and we could be at risk of making an overall loss from traffic growth precisely where additional paths are most valuable. This could lead to Network Rail having weak financial incentives to maximise the use of certain parts of the railway, which could lead to a loss of value to funders and passengers.

Subsequent to the publication of the Draft Determination ORR consulted on two alternatives to the retention of CP4 capacity charge rates. The industry has worked closely together to agree a joint position on the relationship between Schedule 8, the capacity charge and the volume incentive for CP5. This work has been progressed through RDG's working group on contractual and regulatory reform. There have also been useful discussions with ORR. It is clear that RDG's proposal is similar to one of the alternative options proposed by ORR. Network Rail supports the RDG proposal.

The outputs framework for performance needs to be clearer

The framework for performance outputs is unclear and incentives are inconsistent. The Draft Determination sets out trajectories for CP5 that deliver 92.5 per cent PPM by the end of CP5 and 2.2 per cent for CaSL in England and Wales. In the Draft Determination ORR acknowledges the challenging nature of these targets and assesses the level of confidence in delivering these outputs as 45 per cent and 50 per cent respectively. The regulatory framework must recognise that there will be some inevitable uncertainty around the achievement of these targets and that missing these targets should not necessarily lead to regulatory action.

We were clear in the SBP that these levels of output were challenging but that we were committed to working with train operators to deliver them. This commitment remains unchanged but the regulatory framework must recognise the uncertainty in delivering these targets. We consider the treatment of these targets, as well as the annual targets, as an expected outcome rather than a minimum threshold is the right approach.

There are significant uncertainties in forecasting train service performance and many of the factors that have a material impact are outside of our direct control including extreme weather, cable theft, trespass and fatalities. These are all forecast to be significant contributors to delay in CP5 based on CP4 trends. We have assumed that continued mitigation efforts will keep the underlying performance impact of external impacts at recent levels despite the possibility that the underlying risk is growing.

In particular weather has continued to have a major impact on performance and we must continue to invest carefully to reduce the impact of severe weather on the network. For planning purposes it has been assumed that the extent of weather disruption will be the same as the average seen over the last five years (including the two severe winters and significant flooding) but more detailed advice will be provided by the weather and climate specialists during delivery planning.

One of the biggest risks to national performance (when measured as PPM) over the control period is the anticipated growth in passenger and train numbers, and increased train length. This will increase congestion on the network despite the enhancement programmes and it is expected that delays per incident will increase in the short to medium term as timetable recovery is eroded and TOC resources are increasingly utilised. To reduce the impact of traffic growth on performance, we are investing in traffic management systems as part of the Network Operating Strategy. This will benefit reactionary delays by managing traffic in a more efficient manner during perturbed working. However, benefits will take time to be delivered as the programme is rolled out.

Major enhancement schemes put risk on performance during their build phase due to the reduced operational flexibility around key locations. However, completion of capacity schemes is needed to alleviate congestion and reduce delays at key parts of the network. The Thameslink programme's work around London Bridge, which impacts nearly 25 per cent of national train services, presents the single largest risk to performance in CP5. The impact of HS2 related work, for instance at Euston, could be a major performance risk that has yet to be reflected in our forecasts. Much of the capacity work requires train lengthening, and this can have a direct impact on performance.

Impact of HS2

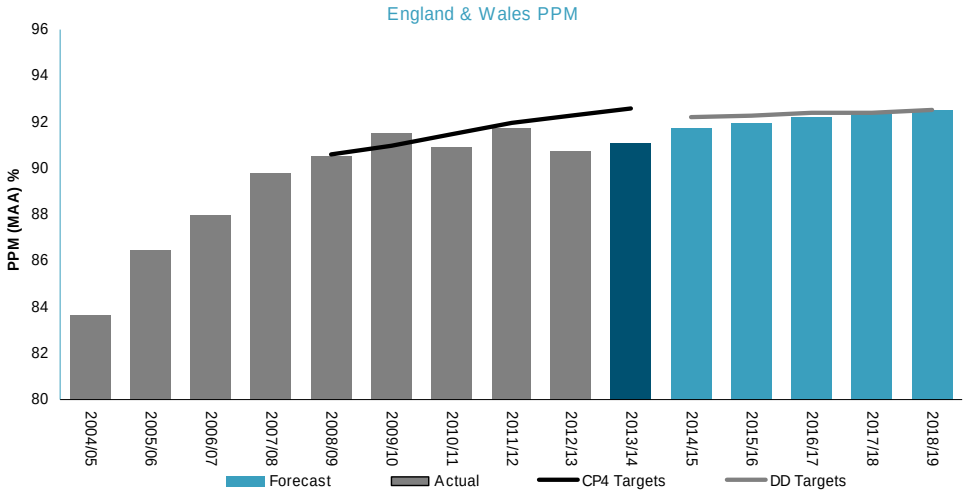
HS2 could have a significant impact on our plans for CP5 and the longer term. However, the HS2 programme is insufficiently developed to enable us to reflect its impacts in our forecasts at this stage. The HS2 construction programme could materially impact on reliability, capacity and network availability during construction, particularly on the LNW and GW routes. Once the impacts are better understood, we will need to reflect them in our forecasts and potentially seek change control for CP5 outputs where appropriate.

Identifying a realistic performance trajectory for CP5

We are committed to working with the passenger operators to delivering the HLOS output of 92.5 per cent PMM by the end of CP5. However it is essential that the trajectory of performance for the control period is correct. The assumptions underlying the Nichols report, on which the Draft Determination trajectory is set, are not valid. For example, an annual improvement of two per cent in TOC on TOC delay was assumed, which is not likely until towards the end of the control period. Nichols also used a CP5 start point of 92.2 per cent PMM, whereas the current JPIPs (2013/14) forecast a 92.0 per cent outturn. Further detail on our response to their assumptions can be found in the supporting document on the CP5 performance trajectory.

Ongoing performance analysis now suggests that the outturn for CP4 will be closer to 91.1 per cent PPM. We have provided details of our analysis in a supporting document. The

level of PPM at the end of 2013/14 will inevitably affect the early years of CP5. Current discussions with TOCs for Schedule 8 benchmarking, based on an earlier view of CP4 outturn performance, suggest that the JPIPs for 2014/15 will result in 92.0 per cent for the first year of CP5. Further route assessment taking into account the latest forecast for 2013/14, leads us to the view that PPM for 2014/15 will be around 91.7 per cent. Using 91.7 per cent as a 2014/15 target, we propose a revised trajectory of performance consistent with the assumptions that we made in the SBP as shown in the graph below. We also propose that it is used for setting Schedule 8 benchmarks.



It is important that we get the right glidepath from the end of CP4 to the end of CP5. The most cost effective way to achieve this improvement in performance is based on the long term plans that we have in place (including completion of our enhancements programme, alignment of TOC incentives through the refranchising process and traffic management). Performance benefits will be realised towards the end of the control period when franchise and timetable changes can realise the benefits from the completed enhancement projects. Equally, there will be pressure on performance in the early years of CP5 due to, for example, the increase in construction works.

Setting a minimum threshold for franchised train operators will constrain the industry and not deliver value for money

The Draft Determination sets a minimum threshold for all train operators of 90 per cent PPM by the end of CP5. We have discussed this requirement with our customers and with DfT. Network Rail and long distance operators have also discussed this issue with ORR. The over-riding concern is the flexibility to best meet the expectations of customers and grow patronage and revenue by optimising the balance between punctuality, journey time and capacity. The setting of this threshold does not reflect the appropriate level of performance to achieve this for a number of operators and the lack of flexibility will constrain the industry from achieving this.

Train operator performance levels should be agreed through Joint Performance Improvement Plans

It is not clear how the framework operates with the establishment of a minimum threshold for each train operator specified in the Draft Determination and the setting of operator-level commitments through the JPIP process. Given the view expressed by train operators in relation to the proposed minimum threshold, it is likely that there will be a difference at a train operator level between the level of performance proposed in the Draft Determination and that agreed through the JPIP process. This cannot be the intended outcome of the proposed framework. If this remains unchanged in the Final Determination then there are likely to be misaligned objectives between Network Rail and its customers in CP5 with no flexibility to align them. We support the setting of local targets using the JPIP process and expect that the Final Determination will reflect the ongoing industry discussion about the appropriateness of setting a 90 per cent PPM minimum threshold for all franchised operators. There should be further discussion on the regulatory treatment of falling within the acceptable range for a JPIP but where this results in a national PPM below the regulatory target for that year.

Alignment of Network Rail and TOC outputs

It is critical that there is alignment between the outputs required of Network Rail through the periodic review and the outputs of train operators specified in the franchising process. We will not deliver the required network level performance outputs if this alignment is not achieved as train operators must contribute to the improvement in performance to levels specified in the periodic review. Where operators are required to deliver a different level of performance then there must be flexibility to adjust the required level of performance delivery from Network Rail, either at operator-level or network-level where appropriate. The table below shows that there is a significant programme of refranchising during CP5.

Franchise	New franchise date
Essex Thameside	September 2014
Thameslink, Southern and Great Northern	September 2014
East Coast	February 2015
Northern	February 2016
TransPennine	February 2016
Great Western	July 2016
Greater Anglia	October 2016
West Coast	April 2017
London Midland	June 2017
East Midlands	October 2017
South Eastern	June 2018
Wales & Borders	October 2018
South West	April 2019
Cross Country	November 2019
Chiltern	December 2021

There needs to be a broader scope for change control

ORR has restricted the scope of change control to the potential to adjust the regulated performance outputs as a result of material changes from franchise specification changes. We consider this to be inadequate. This proposal will constrain our ability to meet the requirements of customers, for example, to accommodate more traffic on the network as a consequence of stronger growth than anticipated, where this might lead to failure to meet a performance output.

Network Rail and the industry more generally has recognised that on an increasingly congested network, we will have to make more and more trade-offs between the level of performance, capacity and journey times. NTF and Planning Oversight Group (POG) asked an industry working group to examine this issue to understand better the nature of these trade-offs and to consider what might be an appropriate framework within which these could be managed. The outcome of the working group (and further discussion at NTF and POG) were reflected in the proposal set out in the Industry Strategic Business Plan, endorsed by RDG, that in CP5 Network Rail together with train operators needed greater flexibility to better manage the trade-offs on the network.

We consider a more appropriate framework would not prescribe the circumstances within which a change to regulated outputs would be proposed. The change control process requires evidence of consultation with affected operators and with ultimate approval for the change required from ORR. The process should be robust enough not to prescribe the qualifying circumstances for such a change control application but allow Network Rail and train operators to develop proposals on their merits and make the case for such changes.

Schedule 8 rates increasing

Schedule 8 of the track access agreements between Network Rail and train operators sets out the compensation arrangements for operators for unplanned disruption caused by Network Rail and operators. It incentivises Network Rail to avoid unnecessary or excessive unplanned disruption, for example as a result of infrastructure problems. It also encourages train operators to avoid delay caused by them. Schedule 8 provides important 'price signals' about the 'value' of mitigating disruption, helping the industry make decisions that are in the best interests of passengers and the customers of freight operators.

We believe that Schedule 8 rates should reflect the full revenue effects of performance. However, we are concerned that Schedule 8 rates for CP5 could be set at the wrong level. Schedule 8 payment rates are crucial parameters for the regulatory regime – substantial financial flows take place on the basis of them each year. To avoid perverse outcomes, sufficiently robust evidence is needed if changes are to take place. We consider that it is important that rates are recalibrated at each control period to make sure they keep pace with changes in fares, demand changes and other behavioural impacts on passengers' tolerance to journey delays. If rates are set appropriately, it should help de-risk franchise bidders' views of uncertainty when formulating their business cases for operating train services. A reduction in bidding risk should increase the value for money for the taxpayer resulting from the outcome of franchise bids – indeed, upholding the value of franchises is one of the core aims of Schedule 8.

As set out in further detail below, the evidence being used by ORR to support its proposal is, at best, uncertain. With this uncertainty in mind, setting payment rates at a level which is 'too high' – as could be the case under ORR's proposal – is likely to be significantly more harmful than setting rates below the full marginal effect. The reasons for this are manifold.

Financial risks and impact on TOCs if Network Rail outperforms

From a financial perspective, money flows between Network Rail and train operators would be too high or too low if Schedule 8 rates are not set at appropriate levels. This would introduce volatility into the financial flows of both TOCs and Network Rail .

For some Network Rail routes, Schedule 8 flows on an annual basis are several times income net of operating, maintenance and renewals costs. Moreover, there is substantial volatility of routes' Schedule 8 payments on a period-by-period basis – often as a result of weather events – which introduces uncertainty into routes' financial flows. Whilst it is appropriate that routes are exposed to the revenue effects of performance, if payment rates are set 'too high', this uncertainty is likely to be excessive. This could undermine financial confidence amongst Network Rail routes and encourage them to hold inappropriate financial contingencies to guard against this risk. In turn, this could promote an inefficient allocation of resources, potentially discouraging innovation and suppressing efforts to improve efficiency.

Moreover, we consider the key test for increasing rates should be that Schedule 8 must not lead to 'catastrophic' situations in CP5, for example whereby TOCs are unable to support payments to Network Rail for delivering outperformance and are therefore exposed to

financial difficulties. However, the higher payment rates being proposed by ORR have not been tested in practice. Even at current payment rates, there has been limited experience of Network Rail outperformance of benchmarks in CP4, whereby TOCs have been paying Network Rail 'bonuses'. We feel that CP5 is more likely to be characterised by situations of outperformance, particularly at the local level.

Given our limited experience even in CP4, it is highly questionable whether TOCs could support such outperformance payments to Network Rail at the higher rates being suggested by ORR. We are very concerned that TOCs with the most experience of Network Rail outperformance in recent years have described the additional farebox revenues implied by the ORR proposals as 'simply not credible'.

It would be a 'bad news story' for the industry if the mechanism that is designed to protect TOCs from variations in performance ended up putting them into financial difficulties. Overall, we consider that insufficient work has been undertaken to give assurance that Schedule 8 will not result in industry parties entering financial difficulties. We do not consider that the test described above has been passed, and believe that it would be imprudent to increase payment rates without considerable further research and testing.

Industry reputational risk

In addition to the very real issues with regards to Network Rail and train operators potentially being inappropriately compensated for the delays that they cause on the network, there is also a reputational risk to the GB railway model if Schedule 8 rates are found to be wrong.

Schedule 8 is a subtle and complex model that is often misunderstood, particularly by the media. It is vital that the whole industry works to improve the understanding of the regime, in particular that the compensation is for the long-term impact on future ticket sales from 'today's' delays, and that Schedule 8 is ultimately there to uphold franchise value. This task will be much harder if the flows of money are 'wrong', and particularly if the flows are demonstrated to be 'too large' and not supported by robust evidence. For example, it would be difficult to defend the Schedule 8 regime if above baseline performance by Network Rail was not followed by increases in ticket sales to the benefit of train operators' finances, over time.

Undermining collaborative working

In the last few years the industry has made significant steps forward in terms of collaboration. We see improved joint-working as a key enabler to continued improvements in the things that 'matter' to users and funders of the railway. Nowhere is this more true than in the area of performance, where Network Rail and operators' activities and achievements are inseparable.

If payment rates are set 'too high' and if Network Rail outperforms, operators will not receive sufficient additional farebox revenues to cover the additional payments they are required to make to Network Rail under Schedule 8. If Network Rail underperforms, operators will benefit more from Schedule 8 payments than they lose from their farebox. Put simply, if payment rates are set 'too high' TOCs will always be financially 'better off' from worse Network Rail performance. We believe that the behaviours this could introduce could be highly distortive. This is a wholly asymmetric risk. Such perverse incentives that encourage conflict are created only if rates are set 'too high'. We note that ORR has itself considered explicitly setting Schedule 8 rates below the full marginal revenue effect, for just this reason (i.e. to encourage closer working relations).

Contractual asymmetry

We consider that it should be recognised that the structure of the track access agreement (TAA) is also such that there are fewer risks for the industry and the credibility of the regulatory regime if rates are set 'too low' than if they are set 'too high'. In particular, the Sustained Poor Performance (SPP) provisions mean that, if Network Rail's formulaic Schedule 8 compensation to a TOC is insufficient, the TOC can claim for actual losses in terms of both revenue and costs (i.e. an existing contractual mechanism provides protection to parties if payment rates are set 'too low'). Given the SPP provisions, even if Schedule 8 rates are set 'too low', deviations in performance from expected levels are highly unlikely to lead to franchise failures or other 'extreme' events.

In contrast, no such contractual 'safety valve' exists if payment rates are set 'too-high'. If payment rates are set 'too high' – meaning that if financial flows between the TOC and Network Rail are in excess of the revenue effects of performance – the imbalance could only be remedied by means of mutual agreement between Network Rail and the TOC to change rates.

Given this asymmetry, we consider that it would be more appropriate for ORR to set Schedule 8 rates conservatively, rather than aggressively high.

Outcome of Network Rail's analysis and wider issues

Network Rail has worked collaboratively with the industry to generate the best available evidence to inform the CP5 recalibration of Schedule 8 rates.

For LSE commuting flows, we have argued strongly that the parameters from the new Passenger Demand Forecasting Handbook (PDFH) – which ORR has sought to use as the basis for Schedule 8 payment rates for CP5 – do not provide a credible representation of the revenue-performance relationship, when used in isolation. We recognise that ORR made a small adjustment to rates (10 per cent) for these flows in light of the representations of Network Rail, and this does represent a step in the right direction. However, despite this adjustment, the Schedule 8 rate increases being proposed by ORR for LSE commuting flows continue to be contrary to the empirical evidence. Every empirical study that has investigated the demand-revenue relationship for these flows has either failed to find a relationship at all, or has found it to be almost negligible. We do not believe that it is appropriate to set these important parameters in a way that is contrary to the empirical evidence, and we do not believe that ORR has presented a credible or well-reasoned justification for its proposal.

For the rest of the country, the 'gap' between the increase in Schedule 8 payment rates being proposed by ORR on the one hand, and the empirical evidence on the other, is less stark. However, a great deal of uncertainty remains around the results for virtually all market segments and all geographies. This is demonstrated by the following, for example:

- there is very significant variation between the results of the underlying studies used to inform ORR's proposals;
- rarely have there been requests to increase payment rates in CP4, and in fact, most requests for changes in rates have been in the downward direction;
- some TOCs have stated that their revenue flows do not respond to performance in the manner implied by ORR's proposals, and have requested 'local revisions' for CP5, as a result; and
- the 'volatility' of early results seen during the rewriting of the PDFH, and the many 'changes' in recommendations.

Given the asymmetric risks discussed above, we believe that the empirical evidence is not sufficiently conclusive to form the basis for such large increases in Schedule 8 rates. We note that DfT, Transport Scotland, members of the freight operator community and some TOCs have formed a similar view.

As explained earlier, we consider that the resulting financial flows could 'make or break' industry parties as they may not be borne out by corresponding changes in ticket sales for train operators. We believe that this could ultimately undermine the industry's reputation. Similarly, we believe that ORR's proposals could 'undo' the industry's work around collaboration, for example by financially 'punishing' TOCs if Network Rail performs well.

Network Rail's proposal

We consider that Schedule 8 payment rates should only increase in line with revenue growth (and changes to underlying generalised journey times) in CP5. This position is echoed by DfT and TS. In addition, freight operators and some passenger train operators share our concerns and are seeking revised arrangements for the parts of the railway that they use.

We note that DfT will be carrying out a fundamental review of the evidence later in the year. We welcome this work and consider that it would be imprudent to pre-empt its outcome by setting payment rates on the basis of the 'new' evidence.

Finally, we consider that transparency is a very important principle. It can help improve the outcomes that railway users care about by promoting challenge and scrutiny. If industry parties believe that the higher Schedule 8 payment rates are the appropriate way forward for CP5, it seems to us to be right that information about Schedule 8 should be made significantly more transparent than is current the case. In future, Schedule 8 payments by TOC are likely to become public and it is important that the industry is able to demonstrate the benefits of Schedule 8 to passengers.

Sustained Poor Performance

ORR has proposed reversing its earlier 'minded to' position, and now proposes keeping the Sustained Poor Performance (SPP) threshold at 10 per cent of benchmark performance. ORR explains that its reasons for doing so are that:

- increasing the SPP threshold would send Network Rail 'the wrong message' during a control period in which Network Rail has not delivered a number of its regulatory performance targets; and
- the SPP provisions have not been used frequently in CP4, which leads ORR to believe that the financial risks on Network Rail from keeping the threshold at 10 per cent will be small, even though a large number of TOCs will remain above the threshold as a result of 'ordinary' fluctuations in performance.

Whilst we understand the point that ORR would wish to avoid sending the wrong 'signals' to Network Rail around the importance of achieving its regulatory performance targets, we are very concerned about its change of position on this issue, and around the lack of industry debate and use of evidence in making this reversal.

We do not agree with the argument that the relatively modest use of the SPP provisions in CP4 means that the financial risks associated with the SPP provisions as they stand are small. We would emphasise that, since publication of the Draft Determination, further claims have come forward and we consider that these should be taken into account.

Much more fundamentally, however, because the SPP provisions have rarely been used to date does not provide a reasonable case for not changing them, if they are not fit for purpose for CP5. ORR has stated in previous publications that it believes that – even when historic below-par Network Rail performance is taken into account – the proportion of operators above the SPP threshold appears to be too high. This view has been echoed by research undertaken by Steer Davies Gleave and by Network Rail, and no parties appear to have contradicted this view in their responses to ORR's consultations to date (particularly its November 2012 consultation on Schedules 4 and 8). We believe that it would be inappropriate to leave in place the current SPP threshold when the evidence-base against doing so is overwhelming.

We note that, even if the SPP threshold was doubled, TOCs would still be able to claim additional compensation for relatively modest deviations from expected performance (this has been demonstrated by Network Rail's own research, and that of our consultants, which has been shared with ORR and the industry). This would also mean that – even if the SPP threshold was increased – if payment rates were set 'too low', TOCs would continue to have significant protection.

The capacity charge

The capacity charge is designed to financially compensate Network Rail for the additional Schedule 8 liability associated with accommodating incremental traffic above the periodic review baseline, thereby neutralising the disincentive on Network Rail to grow traffic above that level. We consider that it is a vital mechanism that ensures that the Schedule 8 regime continues to operate effectively when traffic levels differ from the determined baseline level.

ORR's Draft Determination

In its Draft Determination ORR discusses a possible significant change to the relationship between Schedule 8 payment rates and the capacity charge. It proposed recalibrated Schedule 8 rates in CP5 (as discussed above), but not reflecting these new rates into the capacity charge regime in CP5. This approach would lead to the financial flows of the industry performance regime being significantly misaligned. We do not believe that ORR has fully considered this proposal.

We have analysed ORR's Draft Determination proposals for Schedule 8, Schedule 4, the volume incentive and the capacity charge together so as to better understand their net impact on incentives for traffic growth in CP5.

The summary results of that analysis are set out below:

- even taking account of the increased volume incentive rates that ORR is proposing, the most valuable parts of the network have weakest / negative incentives to grow traffic (i.e WCML and ECML);
- on the ECML Network Rail's net financial incentive over CP5 would be to reduce traffic; and
- because of the inconsistent 'lumpy' net financial incentives for traffic growth across the network, we consider there is a risk of undue discrimination.

It is important to emphasise that the implications of ORR's proposals to change the relationship between Schedule 8 and the capacity charge would not be limited to Network Rail.

Firstly, we are concerned about the implications of ORR's proposals for on-rail competition and open access operations. By undermining the incentives for Network Rail to accommodate new traffic, we believe that ORR's proposals could damage on-rail competition over the long term.

Secondly, we consider that ORR's proposal to 'fix' the capacity charge regime at CP4 levels would mean that capacity charge tariffs would be around 20 years out of date by the end of CP5. Continuing with the CP4 regime would generate an array of anomalies and perverse outcomes. For example, some TOCs (such as ATW) would pay capacity charges that are significantly above marginal costs incurred by Network Rail, and freight capacity charge tariffs would ignore the growth of intermodal traffic on the network since 1999.

Thirdly, ORR's proposals would reverse moves to increase the accuracy of charging and make the regime more 'cost reflective' (by charging at 'service code' rather than 'service group'). We believe that foregoing this greater accuracy could have detrimental impacts on passengers. For example, the up-to-date approach would lead to significant reductions in charges for some London Midland services as a result of increased granularity of charging (moving from service group to service code level). This greater accuracy would make business cases for certain new services more tenable for funders, such as Centro (Centro is proposing a new train service from Coventry to Nuneaton that would become more financially viable with the disaggregated capacity charge rates), ultimately benefitting passengers.

Industry proposed way forward

The industry has, in response to ORR's proposal to change the alignment of the Schedule 8 and capacity charge regimes, worked closely together and has agreed a joint position with regards to the relationship between Schedule 8, the capacity charge and the volume incentive. This work has been progressed through RDG's working group on contractual and regulatory reform. It has been endorsed by all RDG members, the only points of difference being on relatively subtle tone and with regards to the Open Access (OA) and freight transition mechanism for CP5 (where there is a legitimate debate over whether base traffic should or should not be charged the capacity charge).

The result of RDG's work was presented at a workshop that ORR organised, in August. Subsequent to the workshop, Paul Plummer (in his role as chair of the RDG working group on contractual and regulatory reform) wrote formally to ORR setting out RDG's proposal. This letter is enclosed as a supporting document. The RDG approach for the capacity charge in CP5 is very close to an idea that ORR has itself been considering (referred to as its 'option 1'), but appears to have the benefit of not discriminating between incumbent operators and new entrants. Extracts from the RDG position are set out below, along with a brief summary of the process it used in developing its position.

The RDG team started from 'a blank piece of paper' and then built up a set of general principles that were agreed upon. The group then agreed on some specific statements pertinent to schedule 8, the capacity charge and volume incentive. These are set out in the supporting note, and are also reproduced below. Colleagues were also keen to emphasise that *"There are significant charging and incentive issues within the current arrangements, but the RDG group recognise that there is simply insufficient time to attempt a structural 're-design' for CP5".*

RDG considers that open access and freight impacts from the recalibrated capacity charges can be mitigated without needing to compromise the following "general principles" that the RDG considers are important:

1. ORR should promote greater regulatory stability, giving a high regard to its duty to enable persons providing railway services to plan the future of their businesses with a reasonable degree of assurance;

2. Network Rail should continue to be financially incentivised to grow traffic in all parts of the network;
3. Such incentives should be based on consistent principles, for the whole network;
4. Incentive and compensation regimes should be considered for their collective impact, as well as individually. They should reflect the best available evidence and be robust over a range of different performance scenarios;
5. There needs to be an effective and transparent transmission mechanism to incentivise Network Rail staff to balance appropriately the benefits, costs and performance consequences of additional rail traffic and show how it is securing the intended behaviours;
6. The capacity charge should, as far as possible, be designed to charge Network Rail's incremental costs of growth above the control period baseline; and
7. Capacity charge rates that were set in 1999 are unlikely to be consistent with the usage of the network over CP5.

In relation to schedule 8, the capacity charge and volume incentive, RDG made the following "specific statements":

1. The Schedule 8 and capacity charge regimes should continue to be linked so that the cost impacts for Network Rail of accommodating additional trains on the network from increased disruption are borne by the additional trains brought onto the network.
2. It is important that Freight operators' legitimate concerns about potentially significant increases in their capacity charges are addressed.
3. The Schedule 8 rates should be recalibrated such that they reflect, as accurately as possible, the revenue impacts of disruption for train operators.
4. Schedule 8 benchmarks should be recalibrated so that they reflect determined levels of performance in CP5.

RDG also concluded that *"There would be merit in 'special arrangements' for open access capacity charges in CP5"*, and proposed an open access wash-up on part on the LNE route. This wash-up is consistent with the RFOA proposal for freight operators.

Summary

We support the RDG proposal. However, irrespective of how this debate concludes, we strongly believe that the link between Schedule 8 rates and the capacity charge needs to be retained.

Further detail is provided in the supporting documents relating to traffic forecasts, the capacity charge and CP5 PPM trajectories. RDG's proposal on Schedule 8, the capacity charge and the volume incentive for CP5 is also included.

The assumed cost of financing is too low

Key points

We agree with ORR that interest costs are likely to be lower than we assumed in the SBP. There are three primary drivers of the reduction in our latest forecast of interest costs since the SBP. First, the pre-hedging of interest rates that we have implemented relating to debt to be issued in CP5 to take account of current interest rates. Second, we are assuming lower LIBOR spreads than the SBP, although this does increase the risk that these will not be achieved if market conditions are not as we expect. Third, ORR assumed a lower FIM fee than we included in the SBP.

There are a number of areas where we disagree with ORR's new nominal debt cost assumptions for CP5. The assumptions in the Draft Determination for forward market rates are now too low and were taken by the ORR at a low point in the rate cycle. Therefore, these rates should be updated to be more consistent with current market values. Furthermore ORR does not sufficiently take into account potential volatility of future market rates (such as in the context of the likely impact of changes to monetary policy).

ORR assumes that we will hedge 100 per cent of forecast debt issuance and assumes costs on that basis. As explained below, we do not consider this to be efficient. ORR's assumed LIBOR spread (including issuance costs) is within a reasonable range in the context of current and historical market pricing, but it does not provide headroom for any adverse movements and factors outside our control. An additional LIBOR spread is proposed and is justified to be more reflective of prevailing market uncertainties over the five years of CP5.

The quantum of debt outstanding is too low in the Draft Determination, because it understates the likely end point for CP4 and underestimates the amount of debt that will be raised during CP5, some of which is the consequence of different spending assumptions.

In the Draft Determination, ORR assumed that Network Rail holds no cash at the end of CP4, which is not a realistic assumption as Network Rail like any normal company will hold cash for its short term liquidity purposes and at times will hold more cash particularly if it has forthcoming debt redemptions. This is prudent cash management.

We recognise that ORR has assumed that Network Rail will issue some index linked debt during CP5 and agree that we will issue some index linked debt. We also agree the new index linked cost of debt rate proposed by ORR.

ORR's cut-off date for taking into account our CP4 embedded debt and CP5 pre-hedges should be as late as is reasonably possible in order to ensure that its forecast of our overall cost of debt in CP5 is as accurate as possible and includes all executed pre-hedges and debt issuance.

We welcome ORR's statement that our existing debt was efficiently raised at efficient rates. We note that ORR will take account of 100 per cent of the costs of our embedded debt and hedges as part of the Final Determination, and we recognise that we need to demonstrate that it has been efficiently incurred.

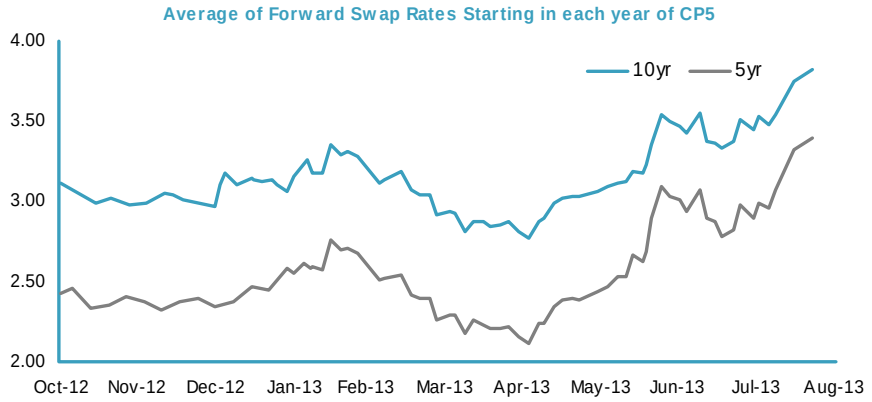
Reflecting the above issues, financing costs in the Draft Determination need to be increased by £689 million in 2012/13 prices

`Forward market rates

Market interest rates have been increasing in recent months, driven by market reaction to central bank comments regarding the timetable for the slowing or unwinding of accommodative asset purchasing policies (quantitative easing). In August, the Bank of England Monetary Policy Committee announced forward guidance of future monetary policy, indicating a seven per cent unemployment threshold for policy tightening, with caveats related to inflation forecasts and expectations.

Current market rates are significantly above the rates used in the SBP as well as the rates used by the ORR to assess Network Rail's CP5 financing costs. Since publication of the Draft Determination, forward rates have increased by about 70 basis points. In addition, it is important to consider the maturity of forward rates used.

The chart below illustrates the evolution of five and 10 year forward swap rates from the time that rates were used to inform the SBP to 21 August 2013. We understand ORR used the forward rates at the end of March to inform the Draft Determination.



Volatility in market rates

The whole of CP4 has coincided with a period of extraordinary and unprecedented central bank support in the form of ultra-low base rates and asset purchasing on a massive scale. Notwithstanding the new Governor of the Bank of England's recent forward guidance, we believe that there is very likely to be some reversal of these policies during CP5. The recent market reaction to the first signs of US Federal Reserve "tapering" of asset purchases before the summer triggered a global sell-off in rates and heightened volatility. It also highlighted how the changes in interest rate expectations in the USA heavily influence interest rate markets globally and in particular sterling. Intra-day volatility in sterling rates has been as high as 37 basis points in July, with an average of 12 basis points for five year swap rates.

It seems clear that the prevailing interest rate risk is asymmetric. Market rates are more likely to be above market expectations than below them. Assuming a lognormal distribution for interest rates, independent bank analysis suggests that there is a positive skew to the probable distribution of future rates which means they are more likely to increase than decrease. To illustrate this asymmetry, our analysis suggests that over a five year period there is a five per cent chance that rates will be 4.88 per cent higher than current market expectations, whereas there is a five per cent chance that interest rates will be 2.04 per cent lower than market expectations.

We must also consider that interest rates are likely to revert towards their long-run average (around four per cent) at some point in the future. Given an improving macroeconomic outlook and a changing policy stance from central banks, we believe that it is likely this will occur during CP5.

We have provided further analysis from independent banks and Oxera as well as our own internal analysis in separate supporting documents.

Pre-hedging of CP5 debt

We want to make best use of hedging so as to give certainty to our financing costs in CP5. Consistent with this, hedging that is not matched to our actual need for debt issuance would import risk into our business as we would need to unwind the necessary instruments which would have both financial and reputational costs.

We have carried out considerable additional analysis, in conjunction with Oxera, to inform our view on interest rate hedging. Based on this analysis we do not consider that hedging 100 per cent of interest rate exposure is appropriate, for the following key reasons:

- uncertainty in size and timing of cash-flows (for example, ORR recognises that £7 billion of CP5 enhancement spend is not yet "firm" and will finalise costs later in CP5);
- interest rate uncertainty (there is a chance that interest rates could reduce further);
- difficulty and costs associated with hedging certain classes of debt;
- capacity, volume pricing and counterparty risk in executing a significant amount of financial derivatives;
- introduction of potential profit and loss volatility (through the application of existing accounting standards) which will also impact on Network Rail's reputation in financial markets and with other stakeholders; and
- potential restriction on our ability to make efficient and flexible funding decisions (and on potential future restructuring of our balance sheet).

We have provided further details in a separate supporting document.

Since the publication of the Draft Determination we have continued in our prudent approach to the reduction of interest rate risk through the execution of forward-starting interest rate swaps, in order to fix the underlying interest rate for forecast debt issuance for CP5. It is important to recognise that the execution of such a large volume of derivatives takes time and is particularly difficult in times of market illiquidity and volatility.

The execution of CP5 pre-hedging commenced in February 2013. We considered starting our hedging programme earlier but we concluded that it was imprudent to do so before the company had finalised the SBP which represents the company's firm business plan for CP5, including planned enhancement spend. If we had commenced our pre-hedging programme before the publication of the SBP, rates achieved would have been higher than those achieved to date which would not have been value for money. We have provided further details on our pre-hedging programme in the supporting documents.

We fully appreciate that ORR needs to conclude on the financing cost component of its Final Determination shortly after the close of its Draft Determination consultation. As we have a significant amount of further 'unhedged' debt to raise over CP5, it is essential that ORR allows sufficient margin for market movements and rate volatility on that portion of future issuance. We consider a margin of 75 basis points above the market rate prevailing at the time of the Final Determination would represent a reasonable allowance for market volatility between the date of ORR's Final Determination and the eventual execution of either more pre-hedges or the issuance of actual debt.

LIBOR Funding Spread

As ORR recognises, it is not possible to hedge Network Rail specific funding spreads above market rates. Therefore, we will be exposed to the risk that these LIBOR spreads will be volatile for the whole of CP5.

In the SBP we proposed a higher LIBOR spread than ORR has assumed. This was based on the significant uncertainty surrounding the UK sovereign credit ratings and the implications for Network Rail's funding spreads, which had seen pronounced widening in the preceding months.

Since the publication of the SBP, there have been credit rating downgrades from Moody's and Fitch whilst Standard & Poor's have affirmed the AAA rating but with a continuing negative outlook. The stable outlooks assigned by Moody's and Fitch on the Aa1/AA+ ratings removed the threat of further rating deterioration in the near future and allowed Network Rail's spreads to stabilise and outperform within the new rating category.

In light of these developments and further consultation with our advisers we have now revised our position. The analyses from our advisers suggest that the LIBOR spread assumed in the Draft Determination is appropriate in the context of current market expectations. However, it leaves no headroom for any unexpected market shocks or the technical impact of less favourable basis swaps. We therefore consider ORR's Final Determination should include an allowance for this uncertainty.

Higher bond yields are likely to lead to a widening in Network Rail's funding spreads as investors require a higher premium compared to holding government bonds to maintain relative returns. If the move in rates is accelerated or disorderly, as is possible given the unprecedented nature of the central bank support measures, the impact on LIBOR spreads could be more significant and above current market expectations.

There are also technical arguments that support the slightly higher LIBOR spread that we are seeking. For example, a move in the US dollar-sterling or sterling three month-six month basis swap will directly lead to changes in Network Rail's funding spread to six month LIBOR for any non-sterling issuance as well as for sterling floating rate issuance. Both of these basis swaps have been at extremely favourable levels throughout CP4, allowing for technically tight LIBOR spreads for our issuance. We do not consider that these conditions are likely to persist throughout CP5

We have provided more analysis from independent banks and our own analysis in a separate supporting document.

FIM fee

At the time of publication of the SBP, our analysis of five years historical corporate utility spreads indicated an average differential of between 120 and 140 basis points. At current spreads we see the differential at 110 to 130 basis points. This is also supported by the pricing of the 25 year bond issue from unguaranteed High Speed 1 at Gilts plus 150 basis points, supporting the level of 110 basis points. On this basis, we agree with the proposed FIM fee of 110 basis points for CP5.

Embedded debt

We welcome the proposal that ORR will fully take account of our embedded debt and hedge rates up to a predetermined 'cut off date' subject to it being efficiently incurred. We consider that ORR's 'cut-off date' should be as late as reasonably possible in order that efficient financing costs are fully taken into consideration for the Final Determination. We are working closely with ORR on this and have agreed the approach for providing updated information. We have provided details of our embedded debt and hedges executed to date and importantly we will need to agree with ORR the forecast opening debt balance for CP5.

ORR has assumed embedded costs of 3.75 per cent nominal and 1.40 per cent index linked. Our current analysis indicates that the cost of embedded nominal debt is 3.91 per cent. The higher rate is due to changes in market rates which affect our floating rate debt. On balance we consider ORR's proposed index linked rate to be reasonable.

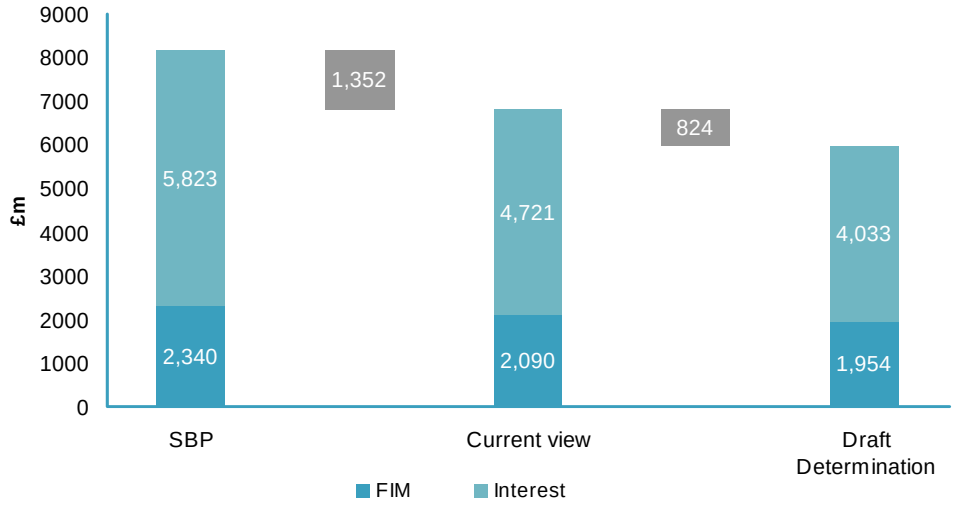
Our current view of the forecast financing costs for CP5 also reflects higher debt at the end of CP4 than was assumed in the SBP. We are currently reviewing our forecasts for 2013/14 and will provide an update to ORR shortly. We also note that the Draft Determination assumed that we do not hold cash. This does not reflect the actual position and is not a realistic assumption.

Weighted average cost of capital

ORR has proposed a pre-tax weighted average cost of capital of 4.91 per cent. We consider that it would be more appropriate to use five per cent recognising the uncertainty in this calculation, with a figure of 4.91 per cent suggesting a level of precision that is unrealistic.

Summary

The diagram below summarises our current view of financing costs compared to the SBP and Draft Determination. It shows a reduction of £1.4 billion compared to the SBP, but it is £0.8 billion higher than the Draft Determination (of which £134 million is due to restoring £1.4 billion of expenditure) (in 2012/13 prices).



We agree the new index linked debt cost of 1.24 per cent is reasonable but we do not agree that the new nominal cost of debt will be as low as assumed by ORR. ORR should increase the cost of embedded nominal debt to 3.91 per cent. It should also increase the level of debt required in order to fund our updated view of debt at the end of CP4 as well as higher expenditure than the Draft Determination for CP5.

Further detail is provided in the supporting documents relating to our cost of debt and hedging programme.

The projections of property income are unrealistic

Key points

ORR's assumptions are based on the DTZ 'Upper' scenario for property income which is £374 million higher than the SBP, comprising additional income of £25 million and inclusion of income previously funded through the investment framework (£122). This equates to an increase in annual income of £123 million by 2018/19. This is assumed to be delivered through untested and speculative growth assumptions as well as investments which are not funded and in some cases not deliverable. We are not aware of the objective justification for this decision.

The assumed increase would require a major change to the management of railway property. While we are ambitious to grow our property income, it is important to recognise this would take time to implement. It will also increase the risk of our property activity as we take on more complex projects.

ORR has assumed speculative income growth of £97 million derived from developer funded enhancements. The scale of this additional investment is so unprecedented that it would increase investment framework income by 80 per cent, when already the majority of schemes are yet to be defined and require an almost fivefold increase in overall development receipts for funding.

ORR has assumed a greater success rate in converting potential sales into actual sales resulting in further income of £75 million. This does not recognise the current depressed nature of the development market that is expected to continue well into CP5 or the challenging physical nature and unfavourable geographic distribution of our sites.

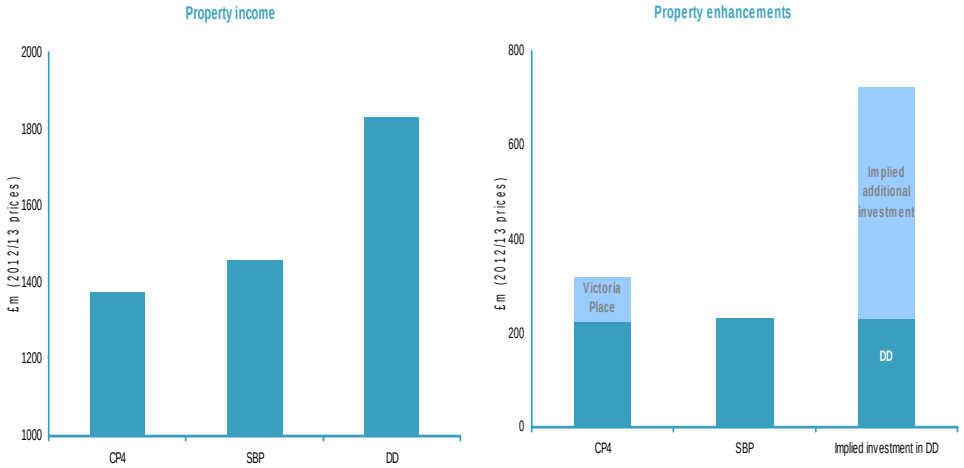
ORR has assumed increased managed stations income of around £50 million through conversion of protected leases as well as higher growth rates. This does not reflect the evidence of the potential increase achievable or the willingness of tenants to negotiate. There has also been no allowance made for the up front investment required to achieve this conversion.

We consider ORR's assumptions are optimistic in a number of other areas including roadside and managed stations advertising and other managed stations income.

Jones Lang LaSalle, which has extensive specific experience of railway properties and developments, substantially agrees with the projections and underlying rationale of the SBP. It concludes that the SBP forecasts are generally reasonable and in some areas optimistic. The only area where it considers there is scope to increase the SBP is sales and development, where an additional £6 million is suggested.

ORR's Draft Determination

ORR has assumed that we can achieve property income that is £251 million greater than our SBP. It has also included additional income of £122 million (together with related capital expenditure of £231 million) that was previously funded through the investment framework within its CP5 income and expenditure assumptions.



Property rental income

ORR has assumed that a further £97 million of income can be generated from high value, low probability investment schemes, some of which require industry parties with conflicting objectives to work together or through developer led schemes. This is an increase of 80 per cent over and above what was proposed for investment framework income in the SBP. Both the scale of this assumption and a lack of enabling investment funding in the Draft Determination mean that it is not achievable.

Some 75 per cent of our existing projected CP5 income derived from enhancements does not currently have a defined source. We are already relying on low probability schemes to fill this gap; additional income assumptions of the scale assumed in the Draft Determination make our already challenging assumption unrealistic. To give an idea of the scale of

additional investment being proposed, it equates to adding 44 per cent (225,000 sqft) of additional space to our retail estate or the equivalent of seven stations. This is not achievable unless we were to purchase assets not directly connected to the railway as speculative investments which would be a significant change to our current approach. While we are ambitious to grow our property income, it is important to recognise this approach takes time to implement.

As well as assuming an unrealistic level of income against high value, low probability schemes, the Draft Determination does not allow for the investment necessary to acquire the assets needed to generate this additional income. Project Mountfield, if it had proceeded, would have required investment spend of £246 million during CP4 and it is reasonable to assume that similar schemes would require investment of a similar magnitude. Instead ORR has indicated that this should be funded by developer contributions (i.e. revenue generating hypothecated gains). Historically, all assets acquired through developers as hypothecated gains have been railway assets with no commercial income generating potential (e.g. Southend Airport). (The only exception is a single shop at Cudworth Street acquired during CP4.) We have calculated, using a seven per cent average yield, that assets worth around £500 million would have to be generated evenly over the control period as development receipts to secure £98 million of income during CP5. This would require our existing development and sales projections to increase almost fivefold which is totally unrealistic.

In addition to further income generated from investment schemes, ORR also assumes that £3 million additional income can be gained by targeting growth at the same level as the retail estate. Only 28 per cent of the rent roll for this income stream can be classed as retail / leisure and that is very much secondary (or even tertiary) in nature. Therefore, applying a retail growth rate throughout does not reflect the fact that by far the most significant use is for industrial purposes. Jones Lang LaSalle (JLL), which has specific experience of railway properties and developments, substantially agrees with the projections and underlying rationale of the SBP. JLL has independently prepared a forecast which considers the make-up of our estate by location and end-usage and it concludes that average annual growth in cash terms of 1.25 per cent could be reasonably expected. This is 2.35 per cent below the underlying commercial estate growth that underpins the SBP and 3.75 per cent below the Draft Determination.

We have provided JLL's report as a separate supporting document.

Property sales

ORR has assumed an increase in our net development and sales projection of £75 million compared to our SBP. This is based on an assumption that the conversion rate for disposals increases from 36 per cent to 60 per cent.

Our supply of straightforward development sites is now effectively exhausted. What remains is either in areas of low demand or has technical difficulties due to the operational interface, such as where rafting is required. This, combined with the challenging development market (due to both reduced demand for completed sites and the poor availability of debt funded development capital), means that our SBP is already very challenging. One third of sales income in the SBP (£33 million) consists of projects yet to be identified; any increase beyond this makes a challenging target unrealistic. Furthermore there is a risk that generating additional sales may only be possible by the disposal of sites which have a potential to generate long term rental receipts.

The SBP was prepared on a site by site basis by surveyors with detailed knowledge of each site. Whilst the assessment of prospects always contains an element of subjectivity, JLL has broadly agreed that both our methodologies and assessment of likely outcomes are realistic. JLL has specifically reviewed our 10 largest CP5 schemes, which form 30 per cent of the SBP submission. JLL has independently concluded that receipts totalling £108 million are likely to be generated during CP5, which is £69 million lower than the Draft Determination.

Managed stations retail income

ORR proposes that an additional £50 million income can be generated by converting two thirds of contracted-in leases to contracted-out status and then applying an increase of 40 per cent rent to these from the start of CP5. In addition, it has adopted rental growth projections higher than those submitted in the SBP, using major stations passenger volumes that were included in the HLOS.

Contracted-in or protected leases offer leaseholders security of tenure during the term of the lease and the right to renew their leases in all apart from limited circumstances. On average the leases in question have an unexpired term of three years. This leads to the conclusion that any conversion of leases from contracted-in to contracted-out status would be staggered across CP5. It is therefore not reasonable to assume that conversions would take place prior to 2016/17 as suggested in the Draft Determination.

The termination of a contracted-in lease also makes the landlord liable to pay compensation to the tenant. In instances of redevelopment, this can vary between one and two times rateable value depending on the length of tenure, although some leases granted at the time of rail privatisation are even more onerous. We have examined independent financial status reports on contracted-in tenants of any magnitude and have concluded that the state of their businesses is such that they would be highly unlikely to accept one-off payments at the expense of longer term increases in their cost bases or the loss of revenues. The cost of any compensation has been omitted from the Draft Determination.

We have examined the differential in rents between all relevant contracted-in and contracted-out leases (which provides the most unbiased sample). The average differential is five per cent, whereas ORR assumed 40 per cent.

Our analysis results in NPV and IRR that are both negative over a twenty year period. Therefore we conclude that this is not commercially viable, which is supported by JLL, and would be poor value for money. We therefore consider that it was appropriate not to include this in our plans.

The forecast for managed stations retail income growth based on the passenger projections in the HLOS is £6 million higher than the SBP. The HLOS includes peak passenger volumes for key London stations in 2013/14 and 2018/19 only. JLL agrees that this methodology is flawed as it applies growth generated by Thameslink and Crossrail in 2018/19 equally across the whole control period despite the projects being completed at different points during CP5. The calculations also ignore off-peak passenger flows which historically have grown more slowly than peak flows and make no consideration of stations situated outside London. Whilst it is not disputed that there is a relationship between passenger volumes and managed stations retail income, the methodology used in the Draft Determination does not consider that some 45 per cent of any gain has no impact due to leases trading beneath their turnover threshold.

JLL has independently prepared a forecast which concludes that average annual growth in cash terms of 2.5 per cent could be reasonably expected. This is 2.1 per cent lower than the level already adopted in the SBP and 3.1 per cent lower than the Draft Determination.

We have provided more analysis in a separate supporting document.

Managed stations other income

ORR proposes in the Draft Determination that £9 million additional income can be generated by increasing rents by £5 per square foot on the first 10,000 square feet of space at each managed station.

Managed stations other income largely consists of ancillary space such as offices and storage let to both train operators and retailers. It is situated outside areas frequented by passengers, often in isolated positions, making it inherently unattractive to parties not already operating on the station and therefore has a value considerably lower than primary retail space. The increase assumed in the Draft Determination when applied to the tenancy base would impact 62 per cent of leases, increasing rent by an average of 24 per cent to over £26 per square foot. The Draft Determination assumes incorrectly that these rent increases, even if they were viable, could be implemented outside the usual lease expiry or rent review provisions. Due to the limited market for these sites, if they are priced above a sustainable rent, they would fall vacant.

Major stations advertising

ORR has assumed that an additional £10 million income can be generated over CP5 from a 10 per cent 'kicker' coming into effect from when the current concession is retendered in August 2015 and a further two per cent achieved on top of the levels projected in the SBP. This is not realistic.

The SBP submission projects like-for-like growth in line with managed stations retail income (i.e. increasing viewership in line with passenger volumes). This could even be considered as aggressive due to competition from on-line media.

We have provided more details in a separate supporting document.

Roadside advertising

ORR has assumed that additional income of £1 million can be generated over CP5 from a 7.5 per cent 'kicker' coming into effect from when the current concession is retendered in February 2016. All evidence available to us suggests that challenging conditions in the roadside advertising market make this unlikely. We have provided more details in a separate supporting document.

Investment framework

ORR has included an allowance for capital expenditure of £231 million relating to incremental property income of £122 million that was previously funded through the investment framework. These projects are highly uncertain due their dependency on commercial opportunities which have yet to materialise, 75 per cent of proposed spend currently being undefined. We have included more details on ORR's proposed approach to incremental investment on page 30 of this response.

Summary of our view

DTZ commented in its report on property income that 'Overall, based on the information provided by NR, we have concluded that NR's overall approach has been robust and its projections are based on assumptions that are broadly reasonable'.

Requests for further information and discussions between ORR, DTZ and Network Rail revolved exclusively around a 'Base' scenario which was £66 million higher than the SBP submission.

DTZ also prepared an 'Upper' scenario, £374 million above the SBP, which contains some extremely ambitious, and in most instances unrealistic assumptions. ORR adopted this in its Draft Determination, a decision that we believe has little justification. JLL, which has extensive experience of railway properties and developments, has been retained to independently review the SBP. It concludes that the methodology used and outcomes predicted are all reasonable and potentially in some areas (property rental income and roadside advertising) overly optimistic. JLL concludes that that there is scope to increase the development and sales projection, but at £6 million this is less than one tenth of the assumed increase in the Draft Determination.

Further detail is provided in the supporting documents relating to our supporting analysis and the independent review by Jones Lang LaSalle

The proposed level of expenditure on information technology is inadequate

Key points

We welcome ORR's recognition that forecasting IT expenditure is uncertain and that it is continuing to review further evidence on the required level expenditure before it publishes the Final Determination. We also welcome its proposal to include a framework for funding incremental investment during CP5 to deliver further benefits in CP5 and beyond.

ORR has reduced IT investment by £275 million to £338 million. The level of investment assumed will enable us to deliver the core renewals to manage our existing IT infrastructure, regulatory and legal requirements and the majority of traffic management (which total £344 million in our plan) but it is not sufficient to support investment in new systems to deliver our CP5 outputs. We have provided ORR with further analysis to demonstrate that £181 million more than Draft Determination is required to achieve specific improvements that were reflected in the SBP in other parts of the business. We also consider that the remaining balance of £88 million is required to enable further stretch savings that are reflected throughout the SBP, although we recognise that detailed analysis of these schemes has not yet been developed.

We do not agree with ORR's assumption that IT investment in CP5 should be a continuation of CP4 levels when IT systems are becoming more integrated into the running of the railway operation. We also do not agree with ORR's inclusion of ORBIS as part of the assessment of IT expenditure, as ORBIS is primarily a business change programme with 71 per cent of its costs associated to business change and only 29 per cent associated with technology.

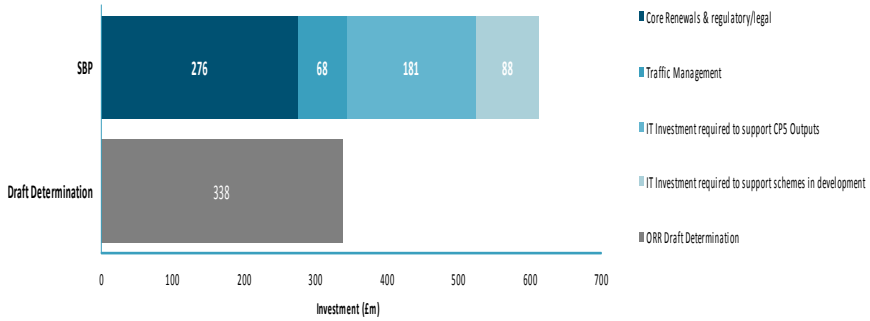
Our SBP did not clearly explain the efficiency savings in our IM operating costs offset by the impact of incremental costs in both CP4 and CP5. While we welcome ORR's recognition of the incremental impact of traffic management on operating costs, it has not taken into account the full effect of new systems. Our plan for CP5 includes a reduction in IM's annual running costs of £12 million (20 per cent) by the end of CP5. This is offset by the incremental costs for managing new systems in CP5 which we expect to be £18 million by the end of CP5. We therefore consider the additional efficiency assumed by ORR is unrealistic as our plan already assumes we will improve underlying efficiency by 20 per cent.

IT investment is required to enable benefits across Network Rail

The investment in IT included in our SBP and detailed in the further supporting evidence, can be divided into three main categories; core IT renewals, IT in support of regulatory and legal requirements and IT in support of strategic and business objectives. This is summarised in the table below.

Analysis of IT renewals in SBP	£ million
Core IT Renewals • Investment required for maintaining the current IT estate including license renewals, maintenance and support, hardware and service refreshes	251
IT in support of regulatory requirements • Investment required in meeting regulatory requirements including Telematics Application for Freight and Passengers (TAF/TAP), European compliance and Track Access Billing (TABs)	25
IT in support of strategic and business objectives • Investment required to enable our strategic objectives to be met including safety, performance, capacity, cost efficiency, sustainability and customer service levels • Investment required to enable specific business objectives to be met including Traffic Management, Operations Planning and Management, Freight, Asset Management, Property, Infrastructure Projects (IP), National Delivery Service (NDS), Information and Security (including Cyber Security), and Corporate (HR, Finance and Risk)	337
Total IT renewals	613

In the Draft Determination, ORR has included £338 million for IT capital investment (based upon a continuation of CP4 levels of expenditure). This will allow for the renewal of existing systems (£251 million), the delivery of regulatory and legislative requirements (£25 million), and the part delivery of traffic management (£68 million). This is illustrated in the diagram below.



The assumed provision of £338 million is not sufficient to support delivery of Network Rail's CP5 expenditure and output targets. Given the criticality of this IT investment in supporting the achievement of our outputs, we have provided additional analysis to demonstrate that a further £181 million is required to create specific initiatives included in the SBP. We consider that the remaining balance of £88 million is required to enable further incremental savings that are reflected throughout the SBP, although we recognise that detailed analysis of these schemes has not yet been developed

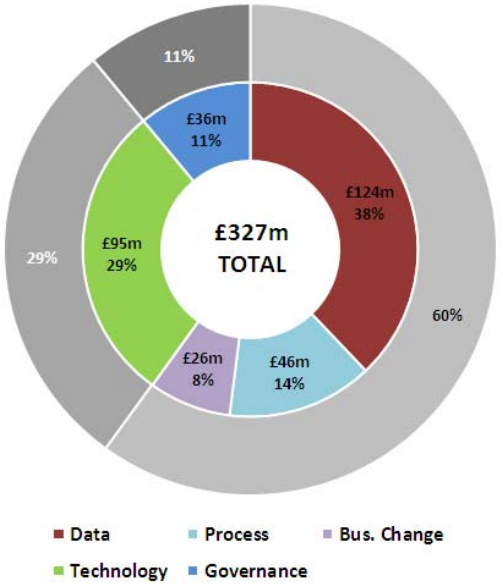
The following table highlights the key areas where IT investment is instrumental in delivering Network Rail efficiency and revenue targets, and HLOS outputs. We have provided further detail to the ORR to demonstrate the requirements for the additional investment.

Domain	IT Programme	IT Investment (£ million)	Supporting Business Initiative
Asset Mgmt	Improving Asset Management Capability New Industry Models for Asset Management	45	Risk Based Maintenance, Intelligent Infrastructure , Indirect Organisational changes, Rapid Response, Working Practices, Contracting Strategy, Multi-Skilling
Corporate Services	Capital Projects Planning and Delivery	36	Sourcing, Automation / Reporting / Analytics, Supplier Lifecycle Management, End-to-end change management, Planning & Project Cost Management, Document Management & Collaboration for IP (iDMS), Enterprise Portfolio Management, Corporate Risk Management tooling
	Logistics Management	25	Logistics Management, Warehouse Management and Distribution, Manufacturing and Manufacturing Management, Vendor Inventory Management, Agile Product Lifecycle management
	Revenue Management	20	Customer Relationship Management, Retail and commercial property management
	Business Transaction Efficiency	15	Business Services (Finance & HR Shared Services),
Network Operations	Operational Planning	5	Industry Access Planning (IAP)
	Performance Services	15	NR Performance Programme
	Operational Management	5	National Control Centres (incl weather strategy) , Devolution & Alliancing Support, Train Identification and Location
	Freight Services	15	Improved Freight performance, supply chain and demand planning
	Total	**181**	

Assessment of IT investment with ORBIS

We do not agree with ORR's view that ORBIS should be included as part of the assessment of IT expenditure. ORBIS is primarily a business change programme with 71 per cent of costs associated with business change and 29 per cent associated with technology.

The scope of the ORBIS programme and associated investment are unique to ORBIS and are not incorporated in our IT renewals. The following diagram, which is included in the Asset Information Strategy Vision and Roadmap, provides analysis of ORBIS programme by cost category. In particular, it shows that only 29 per cent of the total ORBIS expenditure is for technology (£45 million in CP5) with the remainder focussed on improving data and enabling Network Rail to manage the overall change enabled by ORBIS.



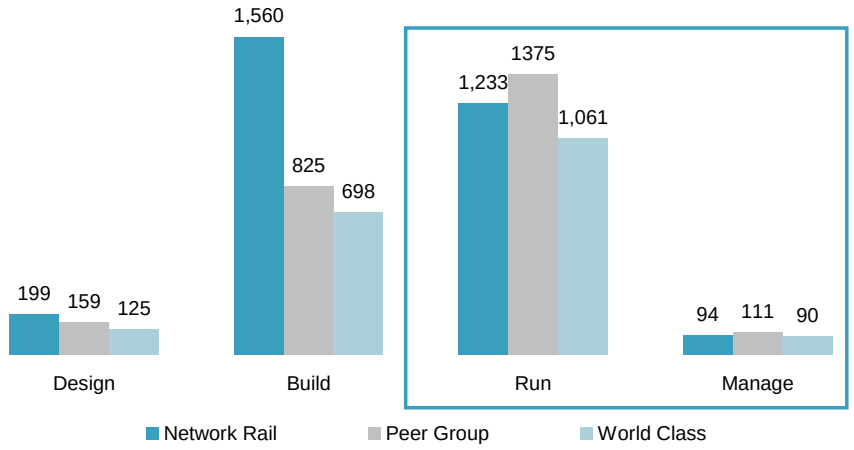
We are therefore continuing to manage ORBIS as a distinct programme reflecting its size and complexity, and separate from the rest of our IT investment spend. The remaining technology investment within CP5 for ORBIS includes further decision support tools to support key asset types, vehicle integration with Europe and the railway infrastructure network model.

CP4 achievements in operating costs

During CP4 we have achieved total annual efficiency savings of £21 million in IM operating costs, as well as absorbing additional annual maintenance and support costs of over £5 million for the introduction of new systems. This equates to underlying efficiency savings of 28 per cent.

Following the independent benchmarking undertaken by the Hackett Group in 2010, significant progress has been made in bridging the gap between peer companies and world class organisations. Since 2010, the IT organisation has transformed its operation to deliver more services, to more customers at lower costs has been achieved through smarter contracting, reduction in technical complexity and efficiencies driven through headcount reductions. These improvements are supported by the recent Hackett benchmark (2012) which demonstrates that IM is now operating at cost levels that are better than our peers, and approaching world class based on the final year of CP4, as indicated in the following graph.

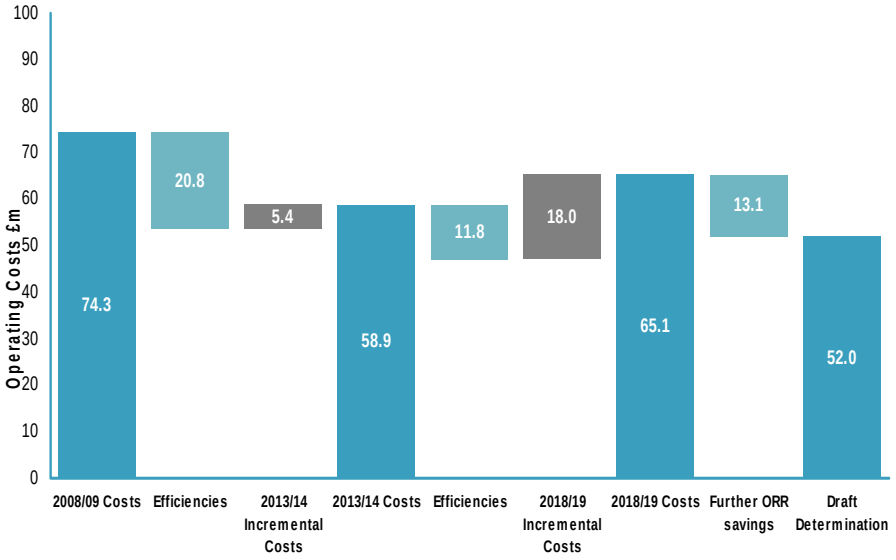
IT process cost allocation (£) per end-user



Further detail is provided in the supporting document relating to further detail of our IT investment.

Our IM CP5 SBP assumptions included efficiency offset by increased activity

We recognise that we failed to provide sufficient transparency of the challenge around our operating costs as part of the SBP. Our plan for CP5 includes a reduction in IM's annual running costs of £12 million (20 per cent) by the end of CP5. This is offset by the incremental costs for managing new systems (such as corporate rostering, TAF/TAP, HR talent/performance management and traffic management) and the ongoing costs for ORBIS systems (estimated to be £18 million over CP5) which were not included in the original plan. ORR's assumptions for IM operating cost savings, which reduce plan by £13 million to £52 million, would pose a significant challenge as it represents a further efficiency saving of 20 per .cent (i.e. 40 per cent in total). There is still a level of uncertainty on the exact support costs throughout CP5. However, even assuming a lower estimate of £10 million of incremental cost by 2018/19, the total required savings would be 30 per cent). And the incremental cost of new systems could be larger than the SBP assumption, which would increase the efficiency challenge. We therefore consider the additional efficiency assumed by ORR to be unrealistic.



The expectations on track and signalling unit costs and efficiencies are unrealistic

Key points

We commissioned independent consultants, Turner & Townsend, to carry out an independent review of the accuracy and robustness of both the SBP and the Draft Determination. They have found the reductions in track and signalling unit costs in the Draft Determination relating to risk and contingency to be incorrect. In their opinion, the two per cent reduction for track unit cost is not appropriate as the opportunity for cost reduction through central management of risk and contingency that is implied by ORR will not exist in CP5. The consultants have also concluded that the three per cent reduction in signalling unit costs would reduce costs to an unmanageable level for CP5. They also do not agree with ORR's grading of our track benchmarking and efficiency work which they consider should graded "good" rather than "fair". This should be reflected in ORR's efficiency profile. Overall the consultants have found little justification for ORR's further efficiency assumption.

The CP5 track expenditure plans in the SBP are already very challenging both in terms of delivery rates and efficiency profile, particularly given the increased complexity and criticality of the work proposed in CP5. Over CP4, we have developed a greater understanding of costs, particularly those elements that can be influenced. This analysis shows that in CP5 we will have the opportunity to drive savings in just over half of the overall track spend. We are working with our supply chain and our customers to deliver savings without compromising safety or sustainability of our assets. The cost of track renewals varies significantly between different projects, based on geography, access work requirements and other factors. We have found the criticality of the route and the complexity of the work to be undertaken are correlated and drive cost upwards. The proportion of work of this nature is increasing considerably from the beginning of CP4 to CP5 as the focus on high criticality routes was not in place for the whole of CP4. The level of access also has a major impact on the cost of work.

In light of the increased complexity of our work and constraints around access to the network, the unit rates and efficiency profile in our SBP are already a significant challenge. We recognise that we have not delivered the track volumes that were planned for CP4 nor achieved the assumed reductions in unit costs. It is clear that successful management of track renewals continues to be a major challenge and it is essential that funding is based on realistic assumptions so that we have a reasonable prospect of success. We are concerned that the savings included in the SBP are already very challenging and that ORR's current assumptions mean failure is highly likely.

Our ability to reduce signalling unit costs beyond the level proposed in the SBP is limited, especially in the earlier years of CP5 as contracts have already been let and workbanks have been locked down. Contrary to ORR's view, our new contracts have not transferred more risk to our contractors. In fact our new signalling contracts result in higher risk to Network Rail but lower cost. Furthermore our ambitious efficiency targets are dependent on the use of novel technology which inherently increases risk compared to the use of conventional technology. We therefore do not agree with ORR's that signalling unit costs can be reduced further than assumed in the SBP.

The further savings of £365 million for track and signalling renewals included in ORR's Draft Determination are not realistic.

ORR's Draft Determination

In the Draft Determination, ORR has made both pre-efficient and post-efficient adjustments to track and signaling expenditure.

- track – two per cent of pre-efficient spend has been removed on the rationale that risk and contingency may have been over-estimated in our unit rates;
- track – an efficiency profile has been applied that is significantly higher than the already challenging target we had set ourselves in the SBP.
- signaling – approximately three per cent of pre-efficient spend has been removed, again on the basis of risk and contingency, but also due to perceived risk transference to our supply chain under our new framework contracts.
- level crossings – 7.5 per cent of pre-efficient spend has been removed, on the suggestion that the rate of abnormals contained with the rates is high.

ORR has also reduced off-track provision for boundary management by 25 per cent, our response to which is detailed in the appendix (Chapter 8).

We commissioned an independent assessment of the SBP and Draft Determination positions for track and signaling. Turner & Townsend's results indicate that the reductions made by ORR are not achievable.

We have gone on to examine ORR's expenditure proposals for track and place them in the context of an increasingly difficult working environment, coupled with our extensive efficiency plans put forward in the SBP. Our quantified risk analysis demonstrates an extremely low probability of success in CP5 with the level of funding allowed for in the Draft Determination.

We have sought to understand ORR's concerns with our signaling and level crossings plans, and have provided further explanation of our position where this was not clearly articulated in our SBP. Monte Carlo analysis again indicates that the reductions in the Draft Determination will most likely lead to an undeliverable programme of work in CP5.

The key findings of the T&T review

The basis for the ORR's track unit cost reduction is incorrect

A two per cent reduction has been applied to track renewal unit costs to reflect the ORR view that 'risk and contingency' should be managed centrally (i.e. nationally by asset rather than at project level) as this approach promotes more efficient delivery. T&T have reviewed the risk management process we are currently implementing and have concluded that this improvement will address all of ORR's concerns. Therefore, in their opinion the two per cent reduction is not appropriate as the opportunity for cost reduction that is implied by the ORR position is not incremental to our current plans.

ORR's grading of our benchmarking and efficiency work for the track asset is incorrect

ORR's efficiency assumptions are based on a weighted average of ORR's and Network Rail's assumptions. The weighting has been determined on the basis of an assessment of the quality of our analysis. The weighting which has been used to track renewals is 50:50. This is based upon our track benchmarking and efficiency evidence being assumed as 'fair'. This is very surprising given that the track benchmarking work was highly commended by Arup as part of its SBP review. The work undertaken by the track team was comprehensive, based on a detailed examination of activities and resources together with analysis of a range of major enabling business changes. This produced very close alignment between the opportunities identified by the benchmarking and the resultant efficiency initiatives. In particular, the models built to determine how and to what extent changes could be implemented within the contracting regime for CP5 were more comprehensive and quantified than for any other asset. T&T consider that the correct grading for the track benchmarking and efficiency work is "good" and that an adjustment should be made in the Final Determination to use a 75:25 weighting.

More generally, T&T consider the basis of the ORR overlay to be opaque, appearing more intuitive than evidenced. It is also not clear how ORR anticipates us to be able to realise further efficiencies.

The basis for the ORR's signalling unit cost reduction is incorrect

ORR has reduced our signalling pre-efficient spend by three per cent. Part of the rationale provided is the lack of risk at a programme level. T&T have reviewed a random sample of our signalling schemes and have concluded that a range of risk factors are managed across the portfolio, and not at the project level. They go on to state that there is adequate oversight and management of risk at a programme level. They conclude further that the three per cent reduction would reduce risk provision to an unmanageable level for CP5.

The track unit rates proposed in SBP are already challenging

T&T's independent view is that the efficient rates used in the SBP are very challenging, to the point that they require regular 'optimal' delivery performance. The further 'stretch' to the targeted efficiencies within the Draft Determination effectively assumes regular 'perfect' delivery performance. This is not credible.

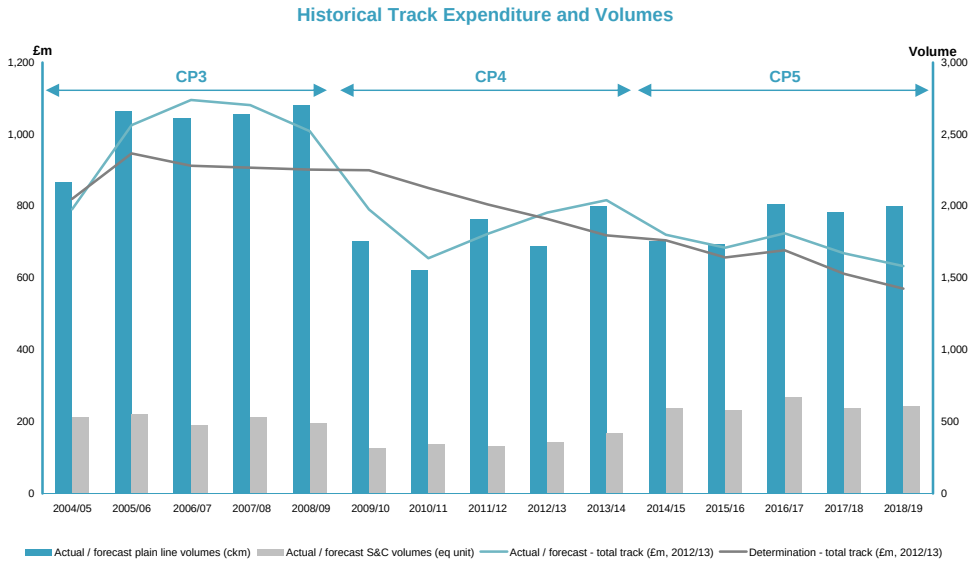
The proposed track unit costs and efficiency assumptions look increasingly difficult in light of our recent end CP4 forecasts

The graph below illustrates our actual and proposed track expenditure and volumes compared to ORR's determinations for CP3, CP4 and CP5.

To deliver the required outputs, we spent significantly more than the determination in CP3. We are largely achieving the determination in CP4 through reprofiling and scope efficiencies. These substantial scope efficiency improvements are founded on a criticality based approach to managing track assets, differentiating intervention strategies with regard to their impact on the railway.

During CP5, we intend to increase the number of both plain line and S&C assets that are treated compared to CP4, although both activity type and work specification is being targeted by route criticality, resulting in a more efficient mix of activities as we move from CP4 to CP5. Compared to CP4, CP5 is characterised by a reduction in plain line complete renewal with an increase in refurbishment activities. The introduction of medium and heavy refurbishment activities increases the number of plain line and S&C assets that are treated. This is designed to maximise the life of the network as a system, and improve or sustain performance for the lowest whole life cost.

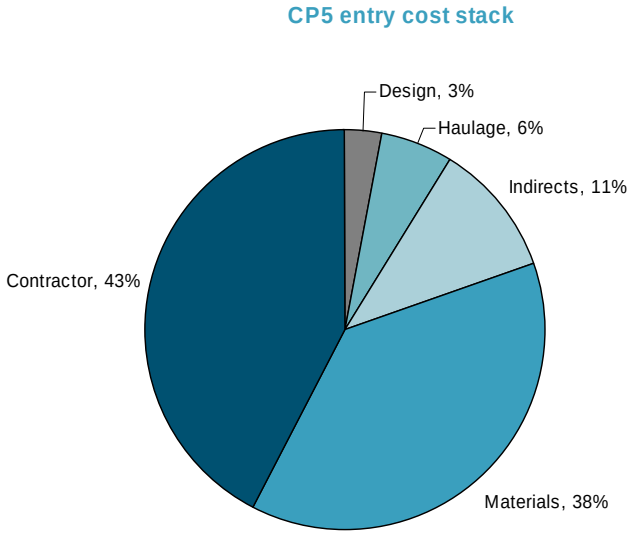
Despite the increase in the number of assets treated, our SBP inlcuded a challenging reduction in expenditure in CP5 compared to CP4. This is the result of changes to asset treatments and improved efficiencies in the way that we deliver our works. Success will depend on delivery of all aspects of our change programme with no significant problems or delays.



Over CP4, we have developed a greater understanding of costs and the elements of the cost stack that can be influenced

ORR agrees that the level of track work in CP5 is commensurate with our track asset policies. Our efficiency and unit rate expectations are predicated on these volumes and are sensitive to any changes. We also believe that ORR recognises that opportunities for driving savings in CP5 are limited to specific elements identified within the cost stack.

The elements making up the track cost stack are contractor costs, material and haulage costs, design costs and other indirect costs. The pie chart below illustrates our cost breakdown for all track activities (including non-volume) for planned work in 2013/14.



ORR recognises that we are actively working with our supply chain and our customers to drive savings. However, our ability to influence each element of costs varies as follows:

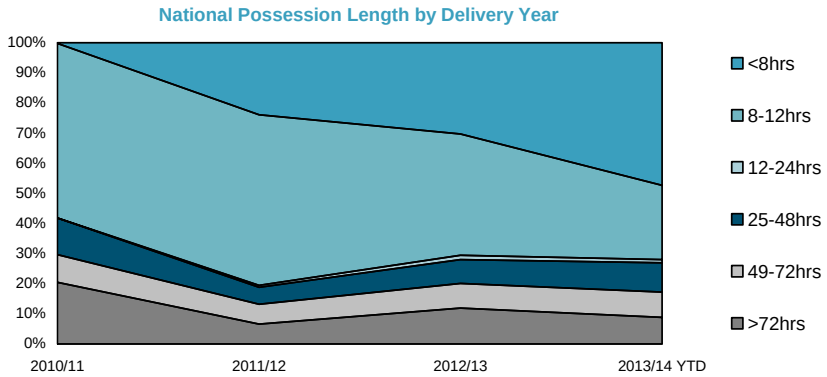
- low: material and haulage costs are subject to the contracting arrangements in place with our external suppliers and are ultimately governed by market rates. A benchmarking exercise by ARUP has concluded that the cost efficiency potential for material is limited to £300, 000 per annum. We therefore have a very limited capability to further influence these costs.This applies to 47 per cent of the cost stack;
- medium: contractor costs equate to some 42 per cent of the cost stack and are seen as one of the main areas to secure further savings through the introduction of new frameworks in 2014/15. However, the targeted savings are already significant (as reflected within our SBP) and are subject to market conditions such that we have a moderate capability to influence these costs;
- high: other indirect costs incorporate managerial and ancillary costs, and are wholly within our control. These costs include about seven per cent of project related staff. This accounts for 11 per cent of the cost stack.

As demonstrated above, opportunities for driving savings in CP5 are limited to just over half of the spend and we are actively working with our supply chain and our customers to drive savings without compromising safety or sustainability of our assets.

The level of access has a major impact on the cost of work, but there is a trade-off between costs and possession disruption

The level of access has a major impact on the cost of work and projects delivered in a number of small possessions require more access overall (which again costs more). Our efficiency targets within the SBP reflect increased use of mid-week possessions which are generally shorter that weekend possessions. ORR's efficiency overlay ignores the operational dynamics of delivering within shorter possessions (i.e. it assumes 'perfection').

Over the last four years, the available access time for renewal work has been eroded, especially for 'all-line' possessions, and we have had to deliver more of our renewal work in shorter, less disruptive possessions. The graph below shows clearly that nationally the spilt between 'less than eight hour' possessions and 'between eight and twelve hour' possessions has changed dramatically.



Whilst this satisfies operational stakeholders such as the train and freight operating companies, it requires multiple mobilisations to deliver the same volumes and we need to rely on greater mechanisation such as high output. This also means that we cannot fully utilise a standard paid 12-hour weekend shift, and we cannot fully utilise the possible two shifts over the weekend as there are few opportunities of 12 to 24 hours

This impacts risk, contingency and ultimately increases cost through:

- reduced productivity;
- increased cost of preparation and follow up;
- an amplification of the impact of plant unreliability and late engineering trains;
- increased sensitivity/fragility of efficiency realisation as loss of planned productivity will have a disproportionate impact.

We are becoming more efficient across all categories of work, but complexity is increasing with more and more critical projects

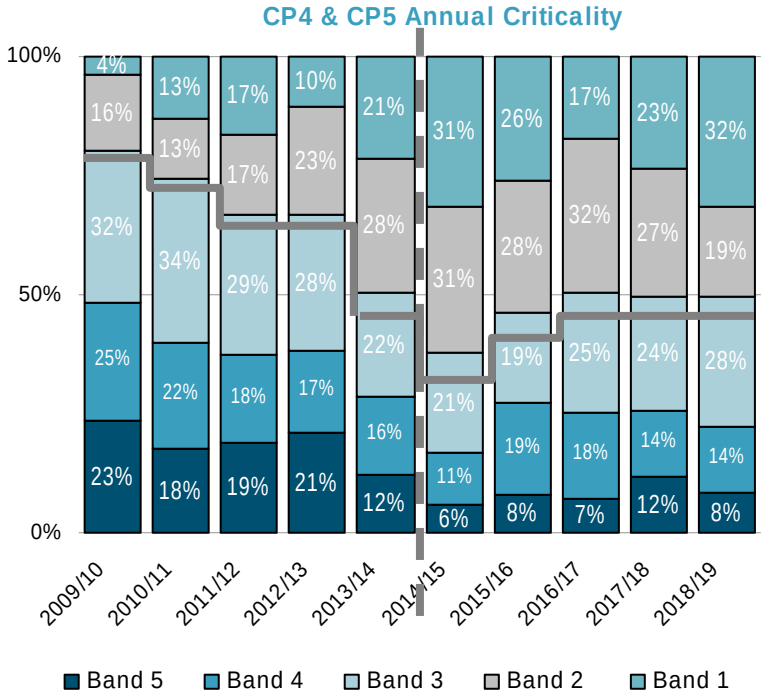
The cost of track renewals varies significantly between different type of projects, based on geography, access work requirements and other factors.

The criticality of the mix of work has changed considerably since 2008, with more and more of our projects being complex with restricted access. The consequence of this is an increased propensity for a small number of operational factors to have a disproportionate impact on the unit rates of delivery. The table below summarises how characteristics of work on high criticality routes drives our costs and limits the efficiency we can achieve.

Characteristic	Why does it import cost?
Short possessions (typically less than 8 hours)	Small production window for volume generation, but incurs the same mobilisation cost as a longer 10-12 hour possession for example. Multiple mobilisations to complete the planned volumes. Use of mechanisation and a greater reliance on plant to perform, requiring contingency plans to ensure delivery. Significant use of high output plant. Currently this is running close to capacity which has an impact on maintenance requirements.
On-time hand back pressures	The impact of failure to hand back possessions on time is substantial and there is an element of time and resource contingency built into plans to mitigate failure.
High-speed hand-backs required	The impact of handing back with low hand-back speeds is substantial in terms of delays and therefore additional cost and time is incurred in ensuring line speeds of over 80mph are possible on hand-back to routes.
Requires long timescales for access planning	Opportunities to recover shortfalls or deliver additional volumes are scarce and, therefore, expensive to plan and could be to the detriment of other works which has costs already incurred against them.
Require 'full renewals' as opposed to refurb items	Full renewal work types are usually specified on these route sections, which incur a greater amount of material and labour cost relative to refurb items.
Requires non like-for-like renewals on S&C	Particularly on S&C, there is a requirement to deliver additional items over and above the like-for-like renewal (such as signalling, overhead lines, etc)
Higher quality materials and specifications	High speed routes require better materials to provide a whole life solution (stronger steel, continuous welded rail, etc)
Adjacent line open	Adjacent line open reduces productivity in terms of time and output but has also added cost in terms of upgrading plant and systems to enable this type of working.
Overhead lines	Isolations are required which incurs an additional cost over non-OLE locations.

The new CP5 track asset policy builds on CP4 by continuing to renew track assets on high criticality route sections. The graph below illustrates the percentage of work in CP4 and CP5 by criticality band. It clearly shows that our profile of work in CP5 is similar to the final year

of CP4 with about 50 per cent of all work on high criticality route sections. The first two years of CP5 will also have the highest proportion of critical works at 62 per cent and 54 per cent respectively.



We have experienced a strong correlation between working in high critically routes and the complexity of the work needing to be undertaken. Whilst we continue to make efficiencies in this area, these types of works are now typically characterised by:

- shorter and lower efficiency possessions;
- timely handback pressures;
- limited short notice access opportunity;
- higher quality materials and specification;
- adjacent line open requirements;
- the presence of over-head lines.

All these effects drive costs up and our ability to control these factors is limited.

We have a series of initiatives in place to continue to drive savings throughout CP5
Our CP5 efficiencies are described in detail in our SBP submission. They are based on applying international best practice to our current operating model. In effect a new operating model and contracting strategy will allow us to deliver efficiencies by better understanding the labour and plant requirements and costs and, therefore, their associated cost savings. There are a number of key enablers associated with these efficiencies:

- access needs to increase – to enable delivery of volumes to be delivered (target 33 per cent mid-week);
- stable and smooth work that is balanced and timely – to save the costs incurred when dealing with a changing workbank;
- understanding the scope of works – early knowledge enables better decisions to be made around optimising delivery solutions and funding;
- resources, productivity and output need to be improved – by multi-skilling, optimising production time and improving plant reliability;
- a supportive operating environment of these changes (e.g. routes, TOCs/FOCs, trade unions and regulators).

The track delivery organisation has developed a seven point improvement plan to ensure delivery of our SBP efficiencies. The improvement areas are shown in the table below. This plan is supported by active workstreams with assigned ownership, route sponsors, outputs and milestones, forming the basis of joint CP5 improvement plans with our route customers.

Seven point improvement plan
Improve safety
Improve plant reliability
Improve planning and planning lock down
Get engineering trains to site and from site on time
Improve competency and multi-skilling
Re-organise IP track delivery into specialist units
Tender new contract

In light of the increasing complexity of our work and reducing access to the network, the unit rates and efficiency profile in our SBP are already a significant challenge
As explained above, the funding, volumes and efficiencies in our SBP assume optimal delivery and are based on best case scenario. They require all aspects of our change programme to be realised successfully and no significant problems to be encountered.

The rates are already 'optimistic' with regard to assumed levels of operational predictability and performance. A small variance on a number of key activities will have a disproportionate cost consequence. Our Monte Carlo analysis also confirmed that the proposed track SBP funds are pushing the boundaries of what might be achievable.

The ORR 'stretch' moves the operational performance assumptions from 'optimistic' to 'all-but-perfect'.
The further 'stretch' to the targeted unit costs and efficiencies in the Draft Determination makes the rates less than credible. ORR's assumptions move the operational performance assumptions from 'optimistic' to 'all-but-perfect'. This is unrealistic.

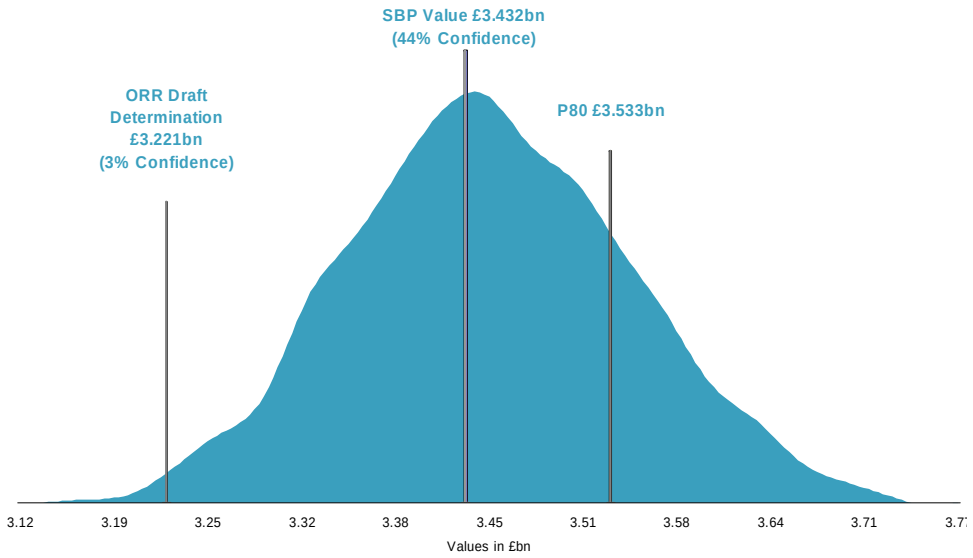
Our ability to deliver the 'stretch' savings in the Draft Determination will be greater for those elements of the cost stack where we have a medium to high ability to influence costs. However the resulting 'targets' look untenable as:

- the SBP commits us to savings of £0.5bn over CP5;
- the current contracting strategy and tender process for the new delivery contracts is not expected to yield reductions beyond the targeted 16 per cent, which is already considered challenging;
- a further £210 million of savings would have to be realised against only 53 per cent (£1.8 billion) of the £3.4 billion total track costs;
- to achieve this would require by 2018/19 a total reduction of between 30 and 35 per cent in both the contractor and our cost base, versus the 18 per cent included in the SBP.

The table below illustrates our anticipated cost stack for the last year of CP5.

Cost stack element	Cost stack	Ability to influence	Pre efficient cost stack	SBP efficiency	Post efficient cost stack	Savings required	Required DD savings	DD cost stack	Revised savings required
			£m	£m	£m		£m	£m	
NDS logistics	6%	L	43	-2	41	5%		41	5%
Materials	38%	L	275	-14	261	5%		261	5%
Contracts	42%	M	304	-53	251	18%	-52	199	35%
Design & TBI	3%	L	22	-1	21	5%		21	5%
Other	11%	H	80	-20	60	26%		59	26%
Scope (Policy, ORBIS)	0%	H	56	-56	0	100%		0	100%
Total	100%		780	-146	634	19%	-52	581	25%

Our Monte Carlo analysis also shows that ORR's stretch target is unrealistic. This analysis has been independently reviewed by Turner & Townsend who have confirmed that the process, parameters and inputs upon which the analysis is based are sound.



Further pressures on the level of track renewals

Since we published the SBP, we have become aware of a number of areas where we may need to increase the level of renewal volumes in CP5. In particular, there is emerging evidence that the volume of traffic on the Stirling-Alloa-Kincardine line is causing it to deteriorate more quickly than had been previously assumed. We are currently discussing this with Transport Scotland. We are also concerned about the track renewal volumes planned on the Wessex route and are reviewing this with South West trains as part of the alliance. This means we would need to achieve further unit cost or scope efficiency to offset the potential volume increases.

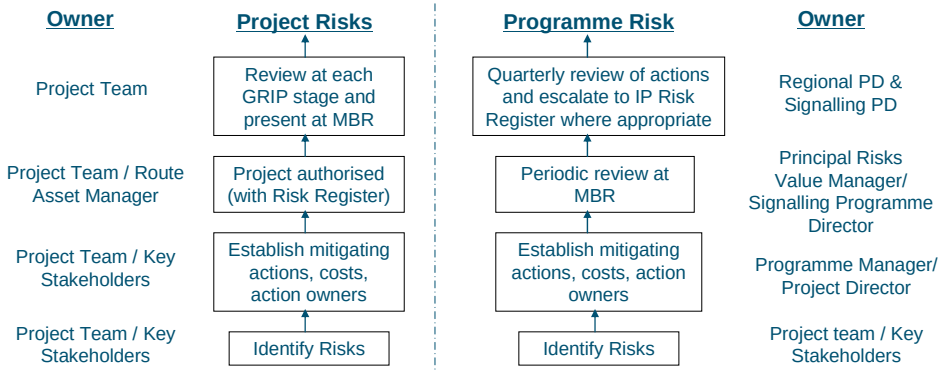
Our ability to reduce signalling unit cost beyond the SBP is limited

We have appropriate oversight and management of risk at a programme level
ORR has cited a lack of strategic oversight in the estimation of risk allowances as one of the reasons for the three per cent pre-efficient reduction in signalling expenditure.

In signalling delivery, we manage risk at either project or programme level depending on the nature of the risk. This is illustrated in the table below.

Examples of project risk	Examples of programme risks
Scheme plan design changes	Changes to standards requiring respecification
Losing critical project team members	Critical national resource shortfall
Weather, landslips	Inter-dependencies with other projects
Theft of cables or other on-site materials	Product approvals
Buried services	Changes to guidelines or legislation

The governance processes are aligned but distinct (as illustrated in the diagram below) with the same monthly business review (MBR) structure overseeing each process. The method of risk management is appropriate, effective and well developed within the business. It does not lead to any overestimation as use of risk allowances is well controlled and divisions of risk type clearly established.



We have not transferred risk to our contractors

ORR has justified reductions for signalling unit rates on the basis that it believes risk has been transferred to our contractors under the recently tendered framework agreements. This is not the case. The main thrust of the contracting strategy for CP5 is identical to CP4, with both adopting a framework approach. For CP5, we have developed this contracting strategy to employ a more collaborative approach with our contractors, including on risk.

We are confident that through working more closely with our delivery partners we can reduce the occurrence of risk items by, for example, agreeing a more complete design earlier on and thereby reducing the number of late stage changes. This is reflected in our reduced risk allowance from 7.1 per cent in CP4 to 6.5 per cent in CP5. Our framework suppliers have recognised the benefits of this more collaborative approach (illustrated in the table below) in the unit rate reduction of 1.75 per cent included in the new contracts.

Collaboration	CP4	CP5
Start of supplier involvement	Supplier involvement starts at detailed design stage (GRIP5)	Preferred supplier status encourages earlier involvement at scheme development stage (GRIP4)
Cost model	Fixed price	Increasing adoption of target cost arrangement, i.e. shared cost of risk
Way of working	Separate locations	Co-located and integrated team
	Standard client/contractor relationship	Partnership mentality
	Man-to-man marking	Removal of duplication
Workbank visibility	Suppliers had limited visibility of our workbank	Full workbank visibility and preferred supplier arrangement engenders earlier/greater supplier commitment

It is therefore not appropriate to make a further reduction in the signalling spend on the basis of increased risk transference. The potential for risk reduction through collaborative working is offset by increased risk resulting from the use of novel technologies, which we discuss below.

Our CP5 efficiency targets require the use of new, less certain technology

Our SBP includes an ambitious efficiency target of 23 per cent at CP5 exit. A substantial element of this relies on the use of new technologies that cannot be as well specified as existing technologies, and therefore their delivery will inevitably be less certain. The use of novel technology accounts for around £1 billion of expenditure within the signalling and level crossing portfolio, nearly a third of our total signalling renewals. This is summarised in the table below.

Use of novel technology in CP5	£M
Signalling	
Modular signalling	144
ERTMS	285
Re-control	230
Level crossings	
Obstacle detection	354
Total	1,013

Contracts are in place

Achieving further savings on signalling schemes being delivered in the early years of CP5 is a particular challenge. These schemes are already in their implementation phase, with scope locked down and invitations to tender (ITT) issued or contracts in place. This makes it

extremely difficult to influence their cost further, which makes it almost inevitable that these projects will exceed the assumptions in the Draft Determination.

We summarise below the extent to which our workbank is already fixed and this will have increased by the time CP5 starts. We have provided separate supporting documents with further details of the schemes already in implementation phase for CP5.

Signalling workbank	2014/15	2015/16
Forecast spend	£431m	£677m
Contract awarded or ITT issued	£306m	£191m
Proportion by value locked down	71%	28%

The cost of abnormals is justifiably greater for level crossings than other assets

ORR has reduced the level crossing spend by 7.5 per cent, part of the basis for which is that the level of abnormal costs in the unit rates is unjustified. This is incorrect. At 30 per cent, abnormals do make up a greater portion of the total cost for level crossings than for other assets as a result of the typically high level of additional works required to facilitate a level crossing renewal. The core cost items in a Level Crossing Equivalent Unit (LXEU) only cover from 'gate-to-gate', and therefore many items that vary considerably from one renewal to another legitimately fall into the category of abnormals. Examples are outlined in the table below. An illustration of how abnormals occur at a level crossing renewal is included in the supporting documentation.

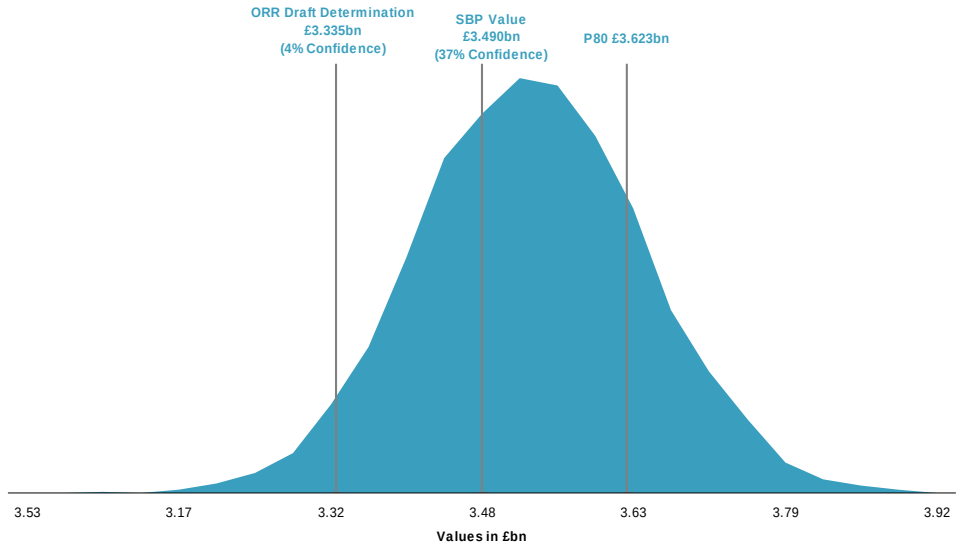
Abnormal items occurring during level crossing renewals	
Road re-profiling	Major civils
Crossing decks	Schedule 4 and Access Condition G
Signalling alterations	Customer information systems
Signalling bi-directional working	Safe cess pathway
Signalling box alterations	Electrification
Brick built relocatable equipment buildings	Permanent way

The cost of abnormals for level crossings is not higher than previous control periods

A further justification for ORR's 7.5 per cent reduction in level crossing expenditure is that the cost of abnormals in the SBP is high compared to previous control periods. This is not correct. The rate of abnormals has been 30 per cent for CP3 and CP4 (and this has been verified by Arup in its review of maintenance and renewal unit costs). For the SBP, the figure is based on an assessment of 38 projects delivered between 2009/10 and 2011/12, which accounts for 70 per cent of the programme in these years. A breakdown of these schemes is provided in the supporting documentation. The 30 per cent uplift is applied to the revised LXEU rates in our new level crossing renewals contracts, themselves a result of an extensive competitive tendering exercise across all available suppliers. Our LXEU rates in the SBP accurately reflect the current market cost of these works.

The reductions to signaling and levels crossings spend produce an undeliverable programme for CP5

Our Monte Carlo analysis shows the likely outcome for a fixed volume programme of work for signaling and level crossing moves from 32 per cent probability of achievement within budget at the SBP, to only three per cent for the Draft Determination. This represents a move from a challenging target to one that is simply unrealistic. Turner & Townsend have examined our analysis and endorsed the approach we have taken.



The cross-cutting efficiency overlays are not valid

In the Draft Determination, cross-cutting efficiency overlays have been applied to all assets, including track and signalling renewals, most notably for the management of inflation and occupational health. As explained in the later section of this response on efficiency and the management of inflation, we do not believe these top-down adjustments are valid in their detail, nor do we believe in the principle of their application to renewals expenditure. Therefore, we consider the application of these cross-cutting efficiencies to renewals expenditure should be reversed in the Final Determination.

Summary

The overall level of track and signalling funding in the SBP is required to deliver our CP5 level of activities.

Further detail is provided in the supporting documents relating to our supporting analysis and an independent review by Turner & Townsend.

The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified

Key points

Cuts have been made to our pre-efficient expenditure on the basis of issues with our unit costs. These cuts significantly reduce the probability that we will be able to achieve our planned renewals work within budget.

The reductions in the Draft Determination on the grounds of risk and contingency are inappropriate. It is legitimate and proper that we accounted for contingent spend within our unit rates, and due to the increase in the use of novel technology and processes which will be required to meet our ambitious efficiency goals, if anything contingent spend is likely to be higher in CP5 than we have allowed for in the SBP.

Further, the ORR has cited a "lack of a programme level understanding of risk" as a key reason for making reductions in most asset categories. This is not a sound basis on which to reduce funding because the level of contingency across the programme is very low for capital works of this scale and risk is already managed within Network Rail at the appropriate level to disincentivise the use of contingent funds.

We believe the ORR's assertion that our new signalling renewals contracts have transferred risk to the supply chain to be incorrect. The increased collaborative nature of the agreements leads to greater risk sharing on our part.

The reduction in the scope of buildings renewals implied by the Draft Determination will have implications for the sustainability of outputs and will lead to sub-optimal whole life costs. If the reduction is not reversed in the Final Determination then these consequences for CP6 need to be acknowledged.

The SBP forecasts of buildings activity do not rely on modelling of asset degradation rates as is claimed in the Draft Determination. CP5 activity is largely driven by recent condition assessments and route plans comprise detailed workbanks. In our view the challenge to degradation rates is an assertion by the reporter that has not been supported by any evidence.

ORR's Draft Determination

ORR has assumed that we could achieve further savings of £269 million across our building (£155 million), electrification & plants (£22m), telecoms (£54m) assets and other investments of £37 million. This includes wheeled plant and machinery (£7 million), corporate offices (£11 million), ORBIS (£15 million) and intelligent infrastructure (£1 million). A lack of risk and contingency has been cited as a key reason for making these reductions.

ORR has also alluded to a number of concerns about the robustness of our building forecasts in the SBP.

Risk and contingency

The risk allowance for abnormal costs should not be removed from the SBP

The principle of pricing for risk or contingency is valid and accepted practice (shown, for example, by the HM Treasure *Green Book* and its accompanying guidance). It is spend that is evidenced to have taken place previously and therefore spend that is statistically likely to occur at similar levels in CP5. Typically, it represents local abnormals that are not appropriate, or even possible, to define as specific line items. These costs vary from project to project, but on average are realised at the levels indicated within the unit rates. The pricing of risk within our SBP is therefore for spend that has happened in the past, and that will happen again in CP5. Reducing this cost significantly increases the likelihood of overspend within the renewals programme.

There is no duplication of risk or contingency within our calculations because our estimating of allowances is evidenced by recent historic spend data. Final accounts for a project identify precisely what portion of contingent funds were required to manage the unforeseen elements of that project. Using historic risk spend in this way for planning purposes is entirely appropriate and in line with the approach used by other industries.

It should also be noted that the ambitious efficiency challenge that we have targeted in the SBP will require us to make increasing use of novel technologies and delivery techniques. These can never be as accurately specified during project cost estimation as traditional or well established technologies, and therefore the use of contingent funds is – if anything – likely to be higher in CP5 than experienced historically.

Programme vs project level treatment of risk and contingency

The ORR asserts that our use of risk and contingency at a disaggregated level (i.e. within unit costs rather than a programme level overlay) introduces a high potential for over estimation. This position is not logical because:

- the risk priced within our SBP over all assets is 2.90 per cent (4.14 per cent for unitised spend, 0.38 per cent for non-unitised spend). This figure is entirely appropriate for a portfolio of work as substantial as the renewals component of the SBP;
- if contingency and risk had been applied in the SBP as a programme level overlay, it would have to be calculated from the sum of risk items experienced within each project – and therefore would amount to the same value.

In terms of project delivery – as opposed to pricing for the SBP – we already manage risk at a programme level where appropriate, as we described for signalling in the previous section. We accept there may be some instances where contingency could be managed at a higher level within renewals delivery. However, we believe strongly that this is not an area of significant opportunity and certainly not valid grounds on which to make substantial reductions to our pre-efficient spend.

Our ability to manage contingency appropriately is verified by the Halcrow study into project and programme management referenced in the Draft Determination. Halcrow asked the following:

> *"When more than one project is being undertaken by an organisation which holds the budget for all of them, there is a chance that some of the risks allowed for in each project come to pass in some but not in others. Similarly, point estimates may be bettered or exceeded across the portfolio. This "portfolio effect" may be influenced by the eventuation or otherwise of risks which are common to all the projects.* ***Sophisticated governance arrangements such as those found in NR take this effect into account, and limit the delegations of authority to draw-down contingency provisions within project budgets, so that control of those provisions can be exercised to the best overall effect****."*

Buildings

ORR has proposed a 16 per cent reduction in CP5 expenditure compared to our SBP. We consider that:

- this reduction is based on a flawed assessment of the components of the SBP; and
- the level of expenditure assumed in the Draft Determination would adversely affect outputs with implications for the sustainability of our buildings assets.

We understand that ORR has not made any specific assumptions about the appropriate level of activity or unit rates for buildings. It has based projected expenditure on the average of for all categories except managed stations and depot plant, for which the SBP activity and pre-efficient costs have been accepted. We also understand that the key reason for this approach is the perceived lack of justification for the increase in activity compared to CP4 and the profile of this expenditure across CP5.

ORR has also cited a number of concerns about the robustness of the SBP forecasts including:

- the asset policy is not demonstrably optimised and will result in unnecessarily high volumes as it is based on pessimistic degradation rates;
- unit costs are "highly uncertain" due to the extent of 'non-unitised' costs and the treatment of contingency; and
- outputs have improved slightly in CP4 and average residual life is projected to increase in the longer term.

ORR has shared a number of specific detailed points about modelling and unit costs but has also indicated that these are only examples. Therefore, we have not responded to the specific points in this document, but are able to do so in further discussion.

ORR's approach for buildings is similar to that adopted in the last periodic review for civils. We are concerned that this could lead to a similar difference in expectations between Network Rail and ORR in respect of the sustainability of the buildings asset management plan for CP5

Expenditure profile

For franchised stations, the overall level of pre-efficient renewal spend is slightly higher than CP4. It should be noted that there has been other activity at stations in CP4 through the NSIP programme. For the other buildings assets the increases are more significant. The increases result from a number of factors:

- an increase in the volume of assets to be inspected and maintained as a result of enhancement projects in CP5, including additional lifts and escalators at stations following Access for All and other enhancement works, and additional lineside buildings installed through the FTN/GSM-R project;
- the overall condition profile of the assets, with a slightly greater level of intervention being required in line with policy during CP5;
- asset information for depots and lineside buildings has vastly improved since the start of CP4 and we are now able to develop detailed workbanks in line with a proactive asset policy rather than carry out works reactively;
- a number of unusual and relatively expensive works being required in CP5 (examples are listed below).

The CP5 profile of expenditure included in the SBP is affected by a number of unusual and relatively high cost projects, and also weighted towards the early years as a number of these projects are scheduled during the first two years. Examples of these projects include:

- Bristol Temple Meads (Western) £15 million on rewiring and trainshed refurbishment, timed to be completed in advance of electrification of the route;
- Moorfields and Hamilton Square stations (LNW) £18 million, complex works on sub-surface stations with restricted access and asbestos issues, programmed to align with possession arrangements;
- canopy refurbishments (Scotland) £11 million for major works at four stations
- Stewarts Lane light maintenance depot (Sussex) £6 million for roof renewal scheduled in first two years of CP5;
- Effingham and Eastleigh NDS depots (Wessex) £5 million of major works in 2014/15 accounting for nearly a third of total NDS depot spend in CP5;
- MDU building rationalisation (LNW) £5 million investment in early CP5 for longer-term cost savings.

All of these items account for a significant percentage of the overall spend in each portfolio on each route. We expect that the actual delivery profile would be smoother and this is one

of the key reasons for including an overall deliverability adjustment in our SBP. This will be refined during the development of our delivery plan.

Asset policy and degradation rates

ORR's assessment appears to be based on a misunderstanding of the basis of our plans. The Draft Determination implies that our plans for franchised stations, light maintenance depots and lineside buildings are all developed using a modelled approach. This is not the case. The SBP route plans were based on detailed workbanks for all the buildings asset portfolios, not just managed stations and depot plant, for which we note that ORR has endorsed our plans as they are workbank-based. We recognise that the detailed review of the route plans and workbanks was limited to a sample of routes assessed by the reporter.

For franchised stations and light maintenance depots, approximately 65 per cent of expenditure in the SBP relates to specific workbank items (over 1,350 schemes), while the remainder comprises inspection, minor works and planned preventative maintenance activities for which provisions are made based on recent history and expected changes (such as increase in volume of assets).

The top-down modelling work remains important in providing a benchmark for the development of the route plans, but it is critical to understand that the modelled activity forecasts for CP5 were driven by the latest condition assessments identifying that work was required in CP5, and not by the impact of assumed rates of degradation.

The degradation rates are relevant to our longer-term forecasts of activity. We commissioned the Buildings Research Establishment (BRE), leading independent experts, to support our work on the degradation rates used in our whole life cost modelling and have fully documented all our analysis. The independent reporter considers that these rates are pessimistic but has not produced any evidence to justify alternative assumptions or to disprove any of our analysis. While there is inevitably some uncertainty around the degradation rates and the whole life cost modelling – reflected in our 'amber' assessment of the efficiency of the buildings policy work – we believe that our analysis is as robust as it can be and that it is not appropriate to rely on the reporter's assertions instead.

Unit costs

ORR states that around 40 per cent of our buildings plans are based on "less robust non-unitised costs". The large majority of this expenditure is in the minor works and planned preventative maintenance categories. These activities are not amenable to unit costs as they comprise a large number of relatively small jobs. We consider that in these areas it is appropriate to base forecasts of future spend on recent experience with appropriate adjustments for any factors that will drive change. For example, LNW spend in these areas is forecast to increase in CP5. This is due to the substantial expansion of Birmingham New Street station and other sites increasing the number of assets to be maintained. Our national unit rates were developed with one of the leading consultancies in this area, Franklin and Andrews. While our national unit rate work book only covered fabric, unit rates have also been developed and applied for works where appropriate. Overall ORR has overstated the level of uncertainty in the costing of our plans.

Outputs

The improvement in the station stewardship measure (SSM) during CP4 does not justify the view that activity can be reduced in CP5 while retaining the SSM score. We have explained that the underlying data shows that the condition of critical, higher expenditure assets is stationary while that for less critical assets has improved. The improvement in scores also reflects the initial prioritisation of inspection activity over a long cycle, with the stations included more recently typically being in better than average condition. SSM is also affected by activity carried out by the station facility operators.

The forecast improvement in asset residual life in CP5 is very marginal and is a necessary increase from a low starting point. The age profile of the asset base reflects previous peaks and troughs in investment, not a steady state, and activity will need to increase in CP5 and future control periods if this is to be managed sustainably.

Impact of expenditure reductions

The reduction in expenditure proposed by ORR implies an equivalent reduction in the level of activity forecast in our SBP for CP5. It is not credible that the gap could be closed through improved efficiency on top of the additional efficiency challenge proposed in the Draft Determination.

The reduced level of spend would require the deferral and descoping of schemes. For franchised stations this will include deferral of a variety of rewiring, platform, canopy and footbridge schemes. For lineside buildings and depots the focus would be on reactive works and to meet legal requirements, and a substantial proportion of major renewal activity would be deferred. Overall this is likely to result in an increase in the level of minor reactive works required to mitigate the impact of deferrals, increasing the pressure on major works.

This reduction will translate into a lower level of asset condition and a decrease in residual life of our assets. For franchised stations we estimate that the PARL output measure of sustainability would fall from 42.5 per cent to 40 per cent or lower. We also estimate that the robustness measure (the number of reactive faults requiring rapid response) would increase by around 15 per cent by the end of CP5. There would also be an adverse impact on train operators and customer satisfaction scores. For other asset portfolios we do not have established measures of condition and cannot readily quantify the impact. However, for lineside buildings and our depots it is likely that we would be limited to reactive works only.

The reduction in the CP5 sustainability measure raises the risk that we are unable to maintain the assets in sustainably, particularly if the lower levels of funding were continued in future control periods. This would also restrict our ability to apply the appropriate whole life cost interventions and increase the longer-term cost of maintaining the assets.

The cross-cutting efficiency overlays are not valid

ORR has applied cross-cutting efficiency overlays to all assets, including buildings, electrification, telecoms, civils and wheeled plant, most notably for the management of

inflation and occupational health. As explained in the later section of this response on efficiency and the management of inflation, we do not believe these top-down adjustments are valid in their detail, nor do we believe in the principle of their application to renewals expenditure. Therefore, we consider the application of these cross-cutting efficiencies to renewals expenditure should be reversed in the Final Determination.

We understand that ORR incorrectly applied efficiency savings of £15 million to ORBIS in the Draft Determination (and £25 million to IT renewals).

Summary

The overall level of core renewals in the SBP is still necessary – even if the ORR or Network Rail reallocates some of this towards track renewals.

The proposed efficiency for the management of inflation is unprecedented and unrealistic

Key points

ORR's Draft Determination includes a highly unconventional additional efficiency target for Network Rail to improve its "management of inflation". ORR considers that we should be able to manage some of the impact of inflation on our cost base by different ways of working with our suppliers. This is an unconventional regulatory approach. We and our advisors do not consider that there is any regulatory precedent for ORR's proposed approach.

ORR's approach would add around an additional 0.2 per cent per year of efficiency challenge in Control Period 5. Whilst this may appear small it amounts to about £150 million of further savings for the company.

We do not agree with ORR's logic or its proposed approach. We consider that this policy would 'double count' aspects of the efficiency challenge.

ORR has included additional savings of around £60 million over CP5 for improved management of occupational health. It is not appropriate to include additional savings for a further specific initiative to savings that have already taken into account both a top-down approach and a "stretch" within a bottom-up assessment. We also have seen no justification that this level of savings can be achieved from improved occupation health management.

ORR has included further savings in maintenance operations, support and industry costs that are unrealistic. These are at least partly based on top-down analysis of total operating costs which should not be applied to individual cost categories.

Management of Inflation

ORR's Draft Determination

ORR's Draft Determination includes a highly unconventional target for Network Rail to improve its "management of inflation". This amounts to an additional cost reduction target of around 0.2 per cent per year across all of Network Rail's expenditure to incentivise better management of inflation, on top of ORR's efficiency challenge.

ORR's additional target is based on research conducted by consultants, CREDO, which compares Network Rail's management of inflation with that of other infrastructure providers.

Inflation is not controllable by Network Rail

Inflation is a measure of the extent to which prices in the economy have increased over a period of time. Network Rail, like all other consumers of products and services, is exposed to the risk of prices increasing. Inflation is not controllable by any one entity, except on a transitional basis over very short periods of time through fixed price contracts. Even then, once a fixed price contract comes up for renewal the provider of services will need to reflect the increased prices that it has itself faced over the previous contract period into its next contract. Indeed, in agreeing a fixed price contract in the first place, the service provider will have factored into that arrangement its own estimate of the risk that it faces in offering to provide a fixed price – it will 'bake in' its view of the increases in the prices of its inputs that it will face over the contract period.

For this reason, it is more or less universally accepted that inflation is an exogenous factor that cannot be controlled by the consumer of services or goods. Indeed, as a thought experiment, if one considered that inflation was controllable by a particular consumer, over a long period of time it would eventually – in real terms – enjoy inputs of zero cost.

No regulatory precedent

The imposition of an extra target to incentivise the efficient management of inflation runs contrary to regulatory precedent in the UK, where the regulator sets an efficiency challenge in real terms and regulated companies are incentivised to outperform that regulatory determination by keeping any outperformance until the end of the regulatory period (the RPI-X model). If particular costs are forecast to increase above (or below) the general rate of inflation, then alternative input price inflation assumptions can be made by the regulator and the incentives for the regulated companies to outperform the determination are unchanged.

OXERA has reviewed the analysis carried out by CREDO, and we have provided its report as a supporting document to our response. This explains that there is no regulatory precedent for ORR's proposal to assert that Network Rail can avoid aspects of inflation in its cost base. As OXERA points out:

"Currently, all economic regulators in the UK assume a central value of RPI and allow the regulated companies to attempt to outperform that assumption. For costs that are expected to deviate significantly from RPI, input price adjustments are made which still leave the firm the incentive to outperform and try to negotiate lower prices with suppliers, to the extent that this is consistent with a healthy supply base in the long term."

Oxera considers that "ORR [should] articulate what it hopes to achieve by imposing an additional cost reduction target, when other regulators do not feel it necessary to do so."

We consider that there is a natural incentive for us to reduce costs and to seek to beat our efficiency targets (in the same way that other regulated companies do). We therefore consider that it is inappropriate to deviate from the conventional regulatory RPI-X approach.

'Double count' of the efficiency challenge

Oxera's calculation suggests that this additional target reduces Network Rail's costs over CP5 by approximately £150 million. This will lead to around an additional 0.2 per cent per year of efficiency challenge in CP5. Whilst this may appear small it amounts to about £150 million of further savings for the company.

ORR's consultants correctly identify that Network Rail is incentivised by ORR to reduce total costs towards that of a firm operating in a competitive market:

"The company, as a whole, is incentivised to manage costs down and outperform the Regulator's assumptions for RPI, but the emphasis is very much on driving down overall costs rather than managing inflation risk explicitly."

ORR's proposed approach introduces a number of risks and uncertainties, which are acknowledged by the ORR. The most significant being a potential double-counting of aspects of Network Rail's efficiency target if the determined efficiency targets do not account for the presence of this additional incentive. We do not consider that ORR has justified how it has tested whether it has double-counted efficiencies.

Even if you accept ORR's hypothesis the adjustment is too high

We believe that it is overly simplistic to state that we treat inflation as a factor beyond our direct control. As the consultants observed, we have a large number of multi-year framework agreements which include price indexation mechanisms. These frameworks are desirable in giving a level of commitment to the market place, and securing availability of supply at a predictable price.

We welcome CREDO's suggestions of techniques that we could use to manage inflation in the supply chain, and we will consider whether any of these could be particularly useful to us. However, by its own admission, CREDO has had a very difficult task in attempting to use its 'maturity model' to estimate potential savings. Issues such as the following impact the credibility of the numbers calculated:

- the model was developed specifically for this study, and has never been used for this or any similar purpose elsewhere;
- CREDO has not identified any empirical evidence of savings made by other organisations through use of the techniques proposed;
- the efficiency benefits assumed from closing the performance gap are 'finger-in-air' assumptions;
- these assumptions do not recognise that, as highlighted in CREDO's report, Network Rail has very limited influence over many of its input prices; and
- it is unlikely to be possible to avoid macroeconomic inflationary pressures beyond the short term.

While CREDO uses a number of scenarios in an attempt to recognise this uncertainty, these merely confirm the sensitivity of the model to the input assumptions. We have suggested that the robustness of the model would be improved by adjusting the maximum possible inflation reduction assumptions by class of expenditure. These assumptions should recognise the relevance of each of the inflation management principles to each class (i.e. where the influence of the principles is generally low, then the maximum possible reduction should also be low).

Remodelling by CREDO using assumptions suggested by Network Rail as more realistic reduced the base case saving estimate by approximately 50 per cent. As a minimum this should be reflected in the Final Determination.

However, overall, we consider that CREDO's modelling approach does not use data that is supported by empirical evidence. Therefore, for it to be used as the basis for setting a significant multi-million pound additional efficiency challenge seems inappropriate.

Management of occupational health

ORR has assumed in its Draft Determination that we can achieve additional savings of around £60 million over CP5 through improved management of occupational health. Having considered this target, consulted with internal experts and engaged external third-party experts in occupational health, it is clear that this efficiency target is unrealistic, impossible to prove conclusively and is likely to be counter to our aims of establishing an open and honest culture relating to employee health and wellbeing.

It is not appropriate to apply an additional top-down overlay of efficiency (related to a specific issue) to spend within operations and support, where the total efficiency already significantly exceeds the top-down benchmark set by the CEPA/Oxera analysis. By definition, the CEPA/Oxera figure already accounts for these savings. Similarly, applying this top-down overlay to maintenance and renewals is not valid. While specific savings may not have been included from occupational health, adding a specific further category of savings takes no account of the unidentified savings already included nor recognises uncertainty in the specific initiatives that have been identified.

At present, there is no academic evidence to quantify the relationship between 'presenteesim' and productivity. We are unclear how ORR has justified the occupational health efficiency target of 0.07 per cent.

In order to achieve savings from better occupational health, there would be a clear requirement for investment in new technology and processes. ORR has included no allowance for this investment and has not recognised that there would be a time lag before financial benefits are delivered. Improvements made in working practices would initially show as reduced diagnoses of health conditions over the next five to fifteen years rather than the next one to five years. It is therefore unrealistic to expect changes in working practises to have an immediate effect on health diagnoses (and therefore costs).

Our absence levels are comparable to similar organisations. An independent review of absence, which we have provided as a separate supporting document, showed that in 2012 lost working time due to absence within Network Rail totals 2.9 per cent of total working time compared to 2.8 per cent in CIPD comparable industries. It is therefore unrealistic to expect significant savings in absence costs.

Currently, there is low participation in occupational health surveillance processes throughout our organisation and our focus is to increase participation in these programmes over the next few years. We expect to see an increase in identification of occupational health conditions over the short to medium term. We do not expect a reduction in occupational health costs when our aim is to increase the number of people taking part (and therefore the likelihood of previously undiagnosed conditions being identified).

ORR's assumption also risks creating a culture where potential signs or symptoms of occupational health conditions may be under-reported in order to meet efficiency targets. It is therefore unrealistic to expect this target to improve compliance with occupational health processes. Our Chief Medical Officer and two occupational health specialists, who have many decades of professional experience in occupational health between them, all consider the efficiency target to be unrealistic and impossible to prove.

Further efficiency analysis

ORR's approach to assessing the level of efficiency that can be achieved included top-down econometric analysis. We have significant concerns about this analysis. We have agreed with ORR that we will discuss this further before it publishes the Final Determination. We plan to work with ORR to develop a way forward on benchmarking.

Other reductions in operating costs are unrealistic

ORR has also assumed that we can achieve further savings in our operating costs of £314 million, comprising reductions in maintenance (£92 million), operations (£59 million), support (£99 million) and industry costs (£64 million). This is offset by a reduction in other single till income of £87 million, which produces a net reduction of £227 million.

Maintenance

The SBP incorporated challenging efficiency savings that we based on specific initiatives together with a further "stretch" of £140 million that was not supported by identified savings. While we welcome ORR's assumption that we will take longer than we assumed to achieve savings, we do not agree with ORR's view that we can achieve higher savings (£24 million) than the SBP by the end of CP5. Due to our existing SBP plans for efficiency in indirect maintenance costs, any additional savings would most likely have to be found in direct maintenance costs. The extra £27 million savings in 2018/19 in the Draft Determination would require an increase in our planned savings in direct maintenance of more than one quarter compared to the savings in our SBP. We consider this pace of change to be unrealistic.

To achieve the savings in the Draft Determination requires savings of around four per cent in each of the final three years of CP5 compared to our assumptions of 2.5 per cent. This rate of change is higher than has been achieved at any point during CP4 for maintenance and we consider reducing the size of the maintenance organisation at this pace potentially introduces sustainability risk and performance risks. We would obviously need to ensure that this level of change was safe.

We welcome ORR's wish to simplify the differences between regulatory and financial accounting by funding reactive maintenance for civils and buildings as operating rather than renewal costs. Since the Draft Determination was published, we have reviewed this proposal in more detail. We have concluded that we do not support the proposal to treat "reactive" maintenance as operating costs in CP5. We currently manage the activitiers to maintain and renew our civils and buildings on an integrated basis. We are also continuing to evolve our planning for civils expenditure as we continue to improve our understanding of these assets. As civils renewals will have a specific regime during CP5, it would not be appropriate to have different regulatory treatments for reactive maintenance and renewals. We are also concerned that transferring reactive maintenance could result in the incentives to transfer activities between operating and capital costs in a manner that might be sub-optimal.

We also note that our latest forecasts indicate that the level of pre-efficient expenditure that would be classified as reactive maintenance may be around £85 million higher than was assumed by ORR in the Draft Determination (with the balance of renewals being lower by the same amount). We have provided a separate supporting document that sets out further details. It is clear that there is considerable uncertainty about the level of civils and buildings work that would be classified as reactive maintenance in our financial accounts. If ORR does decide to transfer of reactive maintenance to operating costs in the Final Determination, we consider that there would need to be a mechanism to enable the baseline to be adjusted to reflect the actual balance between reactive maintenance and renewals during CP5.

Operations

We welcome ORR's support for our operating strategy and the related savings in operations costs that we included in the SBP. We do not, however, agree that the savings assumed by ORR for non-signaller costs are realistic. The additional savings, which total £59 million over CP5, require additional savings of £19 million in the final year of CP5. This equates to a reduction of an additional 14 per cent of the total of non-signaller spend. This does not seem realistic.

The proposed reductions do not take into account the specific costs to which savings are being applied. In particular, cost reductions within managed stations costs, which accounts for 20 per cent of non-signaller resource, would result in a matching reduction in the QX revenue that we receive from TOCs. This does not appear to have been taken into account. We would also be concerned about reducing expenditure on mobile operations managers

(MOMs), who are critical to our management of incidents on the railway and this may have an adverse effect on performance.

More broadly, we do not consider that it is appropriate to apply a top down efficiency assumption (which was based on an average of the CEPA and OXERA studies) as the studies were based on assessing the whole of operations and support expenditure rather than specific elements of the cost base. Adopting this approach takes no account of the different efficiency profiles we have developed for each part of our operating costs and it appears that ORR has applied the top-down assumption only where our assumptions are lower than the overall average. The combined operations and support efficiency challenge in the Draft Determination is 24 per cent, which is well in excess of the CEPA-OXERA average.

Support costs

As well as applying the inflation and occupational health adjustments, ORR has made a number of other specific adjustments to support costs. In particular, it has reduced insurance by £37 million and Group costs by £58 million.

We accept the reduction that ORR has made of around £17 million to account for a double count with Schedule 8 payments. We understand that the further reduction of £20 million is based on ORR's top-down efficiency assumption which we understand also takes into account the independent review by Willis.

Willis concluded that "if Network Rail is viewed in the context of a major UK corporate, our findings are that the overall risk financing programme is efficient." Given this conclusion, it is unclear why ORR would impose a further efficiency challenge in this area. Furthermore, Willis identified downside risks arising from the recent claims record, market conditions, potential catastrophic events and insufficient policy limits that were not reflected in the SBP. Willis did identify potential savings that could be achieved through Network Rail acting like a government department (i.e. transferring risk from the insurance market to the taxpayer by increasing the extent of self insurance). This was particularly in relation to terrorism, although the pricing of cover purchased in the commercial market for specific, high risk assets has not been tested. We do not consider that it is appropriate to be transferring risk to the funders without further discussion. We therefore consider that ORR should not include this reduction in its Final Determination.

We also note that the Final Determination should include the increased insurance costs that will result from increased Schedule 4 rates. We estimate this increased cost to be £5 million.

ORR has excluded "contingency" of £26 million. We have provided further evidence that explains that this is required to cover redundancy costs consistent with the overall savings in the SBP. Our analysis indicates that the redundancy costs in the SBP were understated by £45 million. We also note that additional costs may be required to achieve any further savings assumed by ORR.

ORR has also excluded £25 million of costs relating to consultancy and other costs that we included within Group. We have provided further analysis to ORR to show that during CP4 we have incurred more than £10 million per year on costs that are not included elsewhere in our plan. Given that our forecast of £5 million is significantly less than this historic evidence, ORR should include our SBP estimate in the Final Determination. We have provided further details on these issues to ORR.

Industry costs

In our SBP, we included forecast costs that were based on plans developed by British Transport Police (BTP) and Rail Safety & Standards Board (RSSB). In the Draft Determination, ORR has applied an incremental efficiency on the basis that it considers we should be able drive further savings from those organisations. It also considers that we should be exposed to variances in those costs.

We are aware that BTP has discussed the approach it used to develop its plans for the next five years. It has provided further details in its response to the Draft Determination which we also include as a separate supporting document. It makes clear that there has been a thorough review process in which efficiency savings have been reflected in the plan together with improvements in the overall policing of the railway. This should deliver improvement in the level of crime on the railway some of which will be of direct benefit to Network Rail. It is clearly difficult to value the impact of these benefits on cost and outputs. The most likely benefits will be to train performance (rather than cost) where this should help manage the level of external events such as cable theft. We consider that these benefits are already reflected in our plan although we recognise this is difficult to demonstrate. We therefore consider ORR should not include these incremental cost savings in its Final Determination.

Although we consider the most appropriate approach would be to treat BTP and RSSB costs in the same way as ORR's licence fee and safety levy, an alternative to the ORR's approach would be to determine an incentive rate for these costs, for example at 25 per cent such as currently applies to renewals spend. We believe that this would be preferable to the ORR's current approach as it would at least recognise that these costs are not fully controllable by Network Rail.

Pensions

It has become clear that there are significant risks that our future pension costs may be significantly higher than we forecast in the SBP, including:

- the possibility of a deficit in forthcoming RPS valuation;
- the withdrawal of the National Insurance contribution rebate to contracted out defined benefit schemes from 2016; and
- auto enrolment materially increasing pensions costs.

We estimate the total exposure could be around £135 million over CP5. We have provided a separate supporting document to provide further details to ORR, which should take this into

account when considering our response and the balance of risk in the determination, and its efficiency assumptions in particular.

REBS asymmetry

We included a cost of £71 million for REBS asymmetry in our SBP which ORR has excluded from the Draft Determination. We still consider that there will be real cost to Network Rail of around £70 million as a result of the asymmetry in the design of the mechanism of REBS. If ORR does not decide to fund this cost in its Final Determination, we consider this cost should be logged up in an opex memorandum account and added to the revenue requirement for CP6.

BRBR

In the SBP, we included the cost of maintenance of the assets that are being transferred from British Railway Board (Residuary) Limited ("BRBR") to Network Rail through a transfer scheme that was promoted by The Public Bodies Act 2011 (i.e. we are required to accept to the transfer). ORR has not included this in its Draft Determination as it considers that the effect of the transfer of the BRBR assets to Network Rail should be cost neutral.

In our letter to ORR of 21 January 2013 on the transfer of these assets, we advised that it was DfT's view that transfer would be cost neutral. However, we were careful to highlight that we had not seen any evidence that supported the assertion of cost neutrality or that we would be compensated through the benefits received in owning the assets.

It is clear that the majority of the assets that will be transferred are liabilities as opposed to assets that offer commercial or operational value. While properties at Market Harborough, Hunslet and Glasgow may have potential future benefits for more effective operation, the transferred assets (many of which are bridges) will have an ongoing maintenance cost and we need to make sure they do not have an adverse impact on the network. In the absence of any evidence from DfT to support its view, our position remains that the acquisition of these assets is not cost neutral. We therefore consider that these costs should be reflected in ORR's Final Determination.

Other single till income

ORR has not included open access income of £103 million that we included in the SBP.

ORR has assumed higher profits from Network Rail (HS1) than we assumed in the SBP. It is important that ORR adopts an approach in the Final Determination that is consistent with the periodic review for HS1. There should be a mechanism, using the opex memorandum account, to allow an adjustment after conclusion of the HS1 review.

Summary

We therefore consider that ORR should restore the reduction of £227 million, except for the double count of insurance (£17 million) and the adjustment to ORR fees (£11 million). This results in an overall adjustment of £221 million).

Further detail is provided in the supporting documents relating to ORR's indexation proposals, occupational health, support, pensions costs and reactive maintenance.

The enhancement framework needs to be sufficiently flexible to manage the portfolio efficiently

Key points

We welcome the recognition in the Draft Determination that many of the schemes proposed for CP5 are at an early stage of development and we support the proposal to allow further development activity before the funding of the enhancements portfolio is fixed.

Since publication of the Draft Determination, we have been having constructive discussions with ORR on the approach for confirming project costs in a progressive way as we gain greater certainty of the level of funding required. The approach needs to enable Network Rail to retain the flexibility to manage risks, and therefore funding, across the portfolio as a whole. Our discussions have included revising the approach set out in the Draft Determination with outputs and funding for all projects being confirmed by March 2015. ORR recognises that it is not value for money to set the funding until projects are better developed and to be consistent with this should allow the funding to be progressively fixed through the control period as projects mature to a single defined option and Network Rail commits to scope and milestones. There are a small number of key programmes such as the electric spine where elements of the programme will not reach a single option definition until later in the control period.

While we recognise that the framework will allow funding changes to be made during the further project reviews, we are concerned that the expected costs for projects assumed in the Draft Determination are unrealistic. We have examined the assumptions made by the ORR in terms of adjustments to scope, risk and efficiency that we assumed in the SBP and do not consider these adjustments are justified, particularly for the Northern Hub and East-West rail programmes.

We will work with passenger and freight train operators and seek to enter into commercial arrangements that reward the operators if enhancement cost savings are achieved as a result of their involvement. We would expect this to apply to the projects that are in an early stage of development, and to cover efficient scope to achieve outputs, early agreement of network and station change, and efficient access for delivery. We will seek to use REBS as a basis where appropriate.

The framework for developing the enhancement programme needs to be agreed to avoid uncertainty and delay

ORR recognises that many of the schemes proposed for CP5 are in an early stage of development and we support the proposal to allow further development activity before the overall funding of the enhancements portfolio is fixed. Further discussions have identified that the framework will allow programmes to proceed with funding confirmed on an individual project basis in advance of the overall funding level being finalised.

We propose that project level funding is confirmed at the point at which we seek to update, through change control, the CP5 enhancements plan to set the baseline output scope and milestones for each specific project. This would usually be at the end of GRIP stage 3 with the selection of a preferred option. Where projects are not materially different to the expenditure assumption underlying in the Final Determination, these projects should not be subject to further efficiency review by ORR and should proceed as planned. Where projects materially exceed the expenditure assumptions underpinning the Final Determination, then a further efficiency review may be required before funding is confirmed. This will allow projects to proceed with confidence in advance of the overall funding agreement.

A key issue is refining the nature of the funding assumptions for the Final Determination. In our opinion, for the framework to operate in the way it is intended, the overall funding included in the Final Determination will represent a funding envelope illustrating the best projection of enhancement costs at that time. A final baseline for the setting of the overspend / underspend framework will evolve as the cost of each project is confirmed. Adjustments to the costs included in the Final Determination will be reflected in the RAB. We recognise that an overall increase would lead to consideration of changes (e.g. scope reductions) to address affordability concerns, but this should not delay overall progress of enhancement delivery. There are a small number of key programmes such as the electric spine, where elements of the programme will not reach a single option definition until later in the control period.

The incentivisation of train operators needs to be flexible

We welcome the ORR's proposal to provide flexibility for Network Rail and train operators to develop bespoke arrangements to incentivise train operators to collaborate with Network Rail in developing the most efficient scope to deliver the required outputs. We are currently undertaking a pilot study on the proposed capacity enhancements in the Leeds area to examine how such an incentivisation framework could work. We recognise the benefits of the process as a means of enabling efficient project delivery, although further development of the engagement mechanism with TOCs is needed.

We will work with passenger and freight train operators and seek to enter into commercial arrangements that reward the operators if enhancement cost savings are achieved as a result of their involvement. We would expect this to apply to the projects that are in early stage of development. We would expect that the key issues to be addressed include

efficient scope to achieve outputs, early agreement of network and station change, and efficient access for delivery.

The expected cost of the overall portfolio may be unrealistic

ORR has made a number of adjustments to the costs of the enhancements portfolio in the Draft Determination. We believe that these adjustments are inappropriate. The industry is potentially exposed to reputational risks if the cost of the enhancements portfolio is not accurately reflected in the Final Determination

Adjustments for risk and contingency

We do not agree with some of the adjustments made to risk. On the portfolio risk adjustment, the ability to reduce individual assessments of risk is based on portfolio theory and assumes that there are common causes across the suite of projects in the portfolio. It is not always appropriate to apply a portfolio risk overlay to all projects, particularly for projects which have unique risks and projects that are substantially committed and therefore contractually fixed. For these reasons we consider the inclusion of the Inter-City Express Project, North West Electrification, Stafford Area Improvements and Northern Hub in the portfolio analysis is flawed. We have provided a supporting document that includes further details of our analysis.

ORR has reduced the risk uplift for very early development projects (i.e. GRIP Stage 1 and 2 projects) and has provided no justification for this reduction. The uplifts we have used are based on our internal assessment of these projects and a series of independent studies of our projects and a wider range of rail projects. They include:

- Mott McDonald 2002 (sample of transport projects between 1982 and 2002);
- Flyberg et al. 2004 (sample of transport projects spread across 20 countries to 2002);
- Halcrow studies commissioned by the DfT in 2006 (1,314 Network Rail projects) and 2009 (387 Network Rail Projects);
- DfT guidance;
- the Treasury Green Book based on the above studies.

Our estimating approach for GRIP stage 1 and 2 projects is consistent with the recommendations in these studies, which we believe represent best practice guidance.

Project specific adjustments

The most significant adjustment by ORR to the direct project costs we included in the SBP has been the adjustments made to the Northern Hub programme and the East West Rail project. As with all our programmes, ORR receives regular updates on the development of these programmes. For Northern Hub, whilst we cannot completely reconcile the adjustments made by ORR, it is apparent that amendments to project costs have been made based on emerging cost reductions on parts of the programmes relating to Manchester Victoria, Dore and Grindleford. However, ORR has not taken into account cost pressures on other elements of the programme in relation to Oxford Road, Piccadilly and works at Manchester Airport. By adjusting for cost reductions but not taking account of cost increases on other elements of the programme, this is asymmetrical and inconsistent with ORR's principle that the enhancements should be treated as a package. We have provided a supporting document that sets out in more detail the change in costs to the Northern Hub programme since the SBP.

For East West Rail, the output specification for the project continues to develop. The development project scope is therefore at a relatively early stage (i.e. GRIP stage 2 rather than GRIP stage 4 as assumed in the Draft Determination by ORR). The possibility of additional scope to deliver the required output specification (such as additional freight looping facilities, or a fifth line between Bletchley and Milton Keynes) cannot yet be ruled out until further investigative work has been completed. Similarly, until the effects of the interface with HS2 at Claydon and, potentially, the relationship with the "Electric Spine" proposals are assessed, we consider the reduction in funding by the ORR to be premature.

Efficiency adjustments

In some cases, ORR has applied efficiency adjustments to projects where our SBP was based on a market tested price. Our ability to identify efficiency savings on projects that have been market tested is significantly limited as these projects are substantially committed in terms of design, methodology and procurement and the forecast cost reflects the efficiency savings that were identified in the early development phases. This particularly applies to the Inter-City Express Project, North West Electrification, Stafford Area Improvements and Northern Hub.

Adjustments to unit rates and other estimating methodology adjustments

On a number of projects, the estimating methodology and allowances have been amended by ORR. On the 'Series 2' electrification schemes, the ORR adjustment uses a basic unit rate which excludes the complexity of the specific railway corridor environment, ground conditions (which require piled foundations that are typically a more expensive solution) and the engineering access required that were reflected in the unit rates used in the SBP. All of these factors were absent on the project with the lower basic unit rate.

ORR has also adjusted the unit rates downwards on bulk supply point costs included in a number of projects. Our costs are based on discussions with the National Grid and their recommendations were used in our GRIP Stage 3 estimates for the projects. Also, as these schemes are in early development, our experiences elsewhere show it is likely that site specific complexities will increase the price obtained from the power utility.

The capitalisation of overheads

The analysis carried out for the SBP indicated that the overheads included within capital expenditure might be higher than the amount of operating costs capitalised to projects. ORR has therefore excluded this difference from of £59 million from the Draft Determination.

During CP4, there have been occasions where we have had insufficient internal staff resource to manage projects and so have brought in temporary staff (either directly or using

service agreement) to cover Network Rail posts. Whilst we would normally expect such costs to be charged to operating costs and then capitalised, on several occasions these costs have been charged direct to capital projects. For example, the Key Output 2 team for the Thameslink programme initially included a significant number of individuals supplied by contractors and charged direct to the project. In such cases there is a mismatch between the project overhead and the (lower) amount of capitalised operating costs.

The analysis carried out for the SBP similarly shows that management of projects will require more resource than the Network Rail staffing included in the SBP; the use of contracted in staff resource makes sense in terms of efficiency and effectiveness and it should not be assumed that we should maintain enough staff to cover all activities. Accordingly, it is reasonable for the amount of project overhead in our capital expenditure to be higher than the identified resource cost within operating costs.

Further changes since the SBP

We have continued to develop the enhancements programme since publication of the SBP. There are a number of programmes where required scope has led to an increase the expected cost of these projects and these increased costs will be subject to further discussion with ORR.

Schedule 4 Costs

We provided ORR with an initial assessment of the additional Schedule 4 costs for enhancement schemes as a result of the proposed recalibration of Schedule 4 rates in CP5. Further discussion is required on the appropriate level of additional funding required to be included in the Final Determination. We assume that the final level of funding will reflect the result of this discussion.

GW electrification and MML Electrification

The cost of these projects has increased significantly as a result of increased clarity of the scope, a further assessment of safety (for example the inclusion of fixed earthing devices) and increased understanding of whole life costs. Further detail is contained in the Enhancements detailed response document.

Furthermore, since these projects are in early development phase, the two factors that affect the pricing are the confidence and accuracy of the base estimate that impacts the spot estimate and the level of risk and unknowns that affect the contingency level. Great Western Mainline Electrification and Midland Mainline Electrification at GRIP stage 2 submitted anticipated final costs in the SBP with contingencies of 23 per cent and 20 per cent respectively. This is considerably lower than the typically recommended at GRIP stage 2 and cost growth could not reasonably be expected to be contained within these provisions.

East West Rail

Since the publication of the SBP, it has been agreed with DfT and Chiltern to incorporate the scope of Evergreen 3 Phase 2 into the East West Rail project, as this is considered the most efficient mechanism for delivering the outputs agreed between DfT and Chiltern Railways. It was clear in the SBP that we assumed this scope was to be delivered by Chiltern Railways and the cost of this work was excluded from the SBP. DfT is in the process of agreeing the contribution from Chiltern Railways towards the cost of the works but our assessment is that there is a shortfall for funding. DfT has agreed that this shortfall should be RAB funded and this should be reflected in the Final Determination. We have provided a supporting document which sets out in more detail the reconciliation of costs and funding for the East West programme.

The recategorisation of in-cab fitment as an enhancement ring-fenced fund

We welcome the recategorisation of the ERTMS in-cab fitment as an enhancement ring-fenced-fund in the Draft Determination. This recognises the uncertain nature of the project and the need to continue to develop the programme before outputs and costs can be confirmed. It is also important that there is a robust change control mechanism to manage changes driven by inputs, such as changes to the rolling stock deployment assumptions.

Enhancements milestones consistent with the delivery of passenger benefits

We agree that the definition of milestones in our CP5 Delivery Plan: Enhancements plan should be consistent with proposed delivery of benefits that the project delivers. It should be recognised that this will not be possible where the ultimate delivery of benefits is potentially to be linked to delivery of service outputs by operators and not by Network Rail. Examples of areas where we cannot forecast or be held to account for delivering passenger benefits include projects where refranchising may be the delivery mechanism and may require rolling stock delivery.

Funding of additional works for depots related to electrification programme

The Draft Determination did not provide funding for elements of work such as depot facilities and ancillary works related to the electrification programme, as DfT were examining the potential for the third parties to lead on these elements. We understand that DfT is considering it is more appropriate for Network Rail to deliver this work and for it to be funded through the review. If this approach is adopted, the provision of this funding should be incremental to that already provided in the Draft Determination and the governance of this fund should provide Network Rail with the discretion to utilise the fund as efficiently as possible once the outputs have been specified. Alternatively, DfT could hold and determine the use of the fund.

Further detail is provided in the supporting document relating to the enhancement framework and the costs of our enhancement projects.

What needs to change and the financial consequences

We consider that there are a number of important issues with the Draft Determination and these are summarised below:

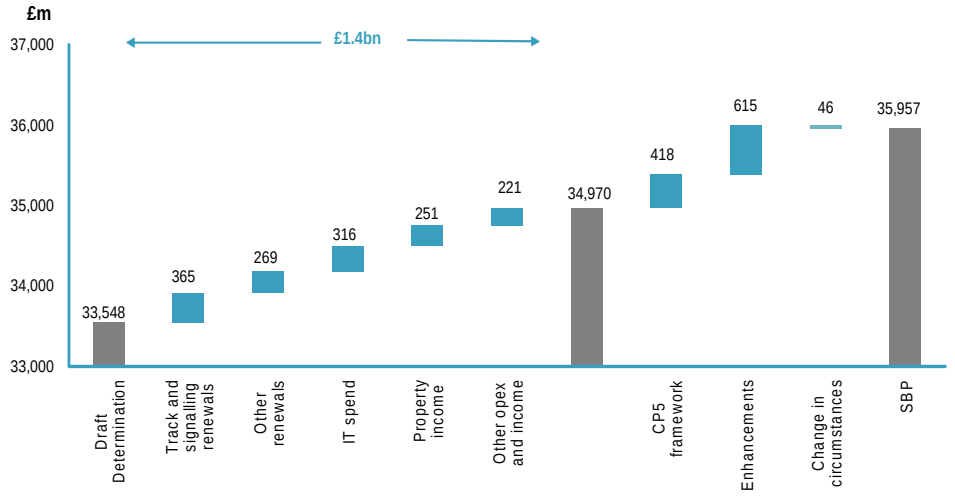
- the scale and pace of change proposed is unrealistic and the Draft Determination is not a balanced package
- the regulatory regime is more intrusive and complex than is regarded as appropriate in other sectors
- the approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures
- the investment framework should support a broad range of opportunities including efficiency, safety and R&D
- the capacity and performance framework is inconsistent and potentially inflexible
- the assumed cost of financing is too low
- the projections of property income are unrealistic
- the proposed level of expenditure on information technology is inadequate
- the expectations on track and signalling unit costs and efficiencies are unrealistic
- the assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified
- the proposed efficiency for the management of inflation is unprecedented and unrealistic
- the enhancement framework needs to be sufficiently flexible to manage the portfolio efficiently.

To address these issues requires some clarification or refinement to the proposed regulatory framework and we are keen to explore this further with ORR and the rest of the industry. But it also requires some changes to the assumed expenditure levels in the Draft Determination.

The chart below illustrates the changes to our planned expenditure in CP5 from the Draft Determination that we consider necessary to make the Final Determination a realistic settlement. The chart also shows how other elements of expenditure proposed in the SBP but not provided for in the Draft Determination are either accommodated through the proposed investment framework or the expenditure is no longer justified due to changes in circumstance.

We are asking ORR to restore £1.4 billion of income and expenditure that it has removed from the SBP. In its Draft Determination, ORR stated that it had removed £1.9 billion of expenditure from the SBP which comprises operating, maintenance and renewal costs. ORR also removed £251 million of property income and £76 million of industry costs, and included lower other single till income of £87 million that were not included in its headline figure. We have also assumed that part of the renewals reduction (£0.7 billion) will be addressed through the regulatory framework. In the following paragraphs we explain each element of this change.

Changes in planned GB expenditure



The level of cost reduction in our SBP for track and signalling renewals (£365 million) is already a very significant challenge and it is unrealistic to assume that we will achieve even more savings. It comprises:

- additional core track renewals efficiency of £180 million;
- a reduction in expenditure on fencing of £30 million which should be restored given the overall challenge we face to achieve the overall reductions in track renewals in CP5;
- additional efficiency savings in signalling renewals of £155 million.

Significant reductions have been assumed for unit costs and further efficiency savings across other categories of renewals (£269 million), which are not justified. The overall level of core renewals in the SBP is still necessary, even if ORR or Network Rail reallocates some of this towards track renewals. The savings that need to be reversed include buildings (£155 million), electrification (£22 million) and telecoms (£54 million). Other investment of £37 million which includes wheeled plant and machinery (£7 million), corporate offices (£11 million), ORBIS (£15 million), intelligent infrastructure (£1 million).

ORR has not included sufficient investment in IT to support the efficiency savings elsewhere in the business (£275 million less than SBP), although it has recognised in the Draft Determination that it needs to do further work in this area. It has also assumed further

efficiency savings in the operating costs (£41 million) for our Information Management function that does not sufficiently recognise the incremental system management costs that we will incur in CP5. The overall IT expenditure in the SBP, which is £316 million higher than SBP, is required to manage existing systems and to support improvements throughout the business.

ORR has assumed we can achieve a significant increase in property income (£251 million) which does not reflect current market conditions. This includes:

- additional income from low probability schemes (£97 million);
- increased income from development and sales (£75 million);
- additional retail income from managed stations (£54 million);
- further advertising income (£11 million);
- other increases as a result of higher growth rates (£14 million)

It has also not included sufficient investment to enable the assumed increase in revenue. It has incorporated income and expenditure forecasts that were excluded from previous periodic reviews and managed through the investment framework. We have included these figures in the changes to the CP5 framework below.

Reductions have been assumed for other categories of income and expenditure (£221 million) which we also consider to be unrealistic. These include:

- further reduction in operating costs (£59 million) largely though a significant increase in savings in non-signaller costs;
- reduction in maintenance (£24 million) through the reprofiling of savings included in the SBP with higher savings being achieved by the end of CP5 together with a significant reduction (£67 million) in reactive maintenance of civils and buildings which is being reclassified from renewals to maintenance;
- additional savings for support costs (£82 million) including reduced insurance costs (£20 million) and lower Group costs (£58 million) which includes redundancy costs that are expected to be required to achieve the efficiency savings as well as consultancy to support achievement of our overall objectives;
- exclusion of the incremental costs that will result from the asymmetric route efficiency benefits sharing mechanism (£68 million);
- exclusion of the incremental costs that will result from the transfer of assets from the BRBR (£9 million);
- higher profit assumed to be achieved by Network Rail (HS1) (£16 million);
- offset by slightly higher industry costs (£1 million), although this includes an assumed reduction in the costs of BTP (£26 million)
- also offset by lower other single till income as a result of an omission of some open access income in the Draft Determination (£103 million).

The key areas of expenditure (£418 million) addressed by the regulatory framework, rather being funded directly through the determination, relate to reductions in:

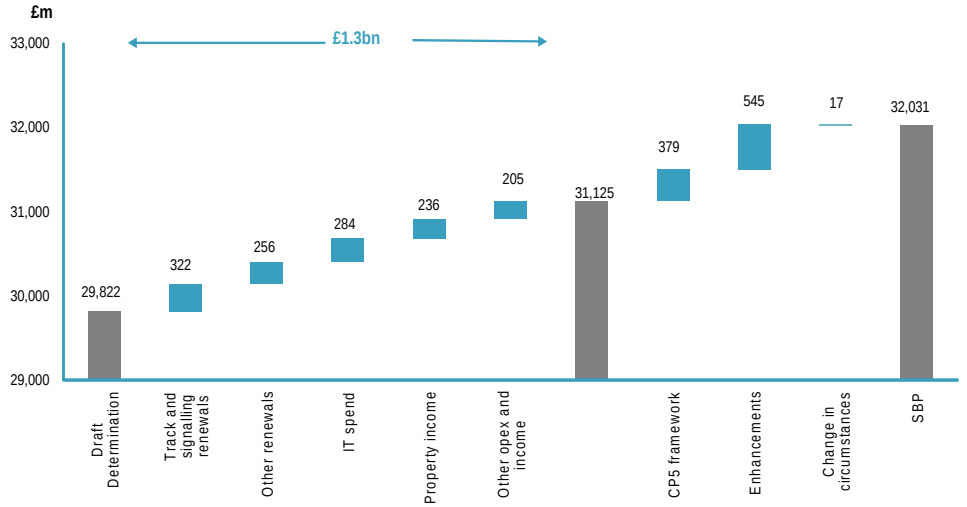
- research and development (£300 million), although it is noted that an additional £50 million is included in enhancement expenditure;
- additional civils expenditure (£251 million);
- safety related investment (£157 million);
- additional income (£179 million) offset by additional capital expenditure (£466 million) for property and other schemes that were previously funded separately from the periodic review through the investment framework.

The aggregate adjustment to enhancement funding is £615 million and is subject to a further review in March 2015. We will work with train operators to achieve the significant cost reductions but there is a risk that we will not achieve the assumed savings.

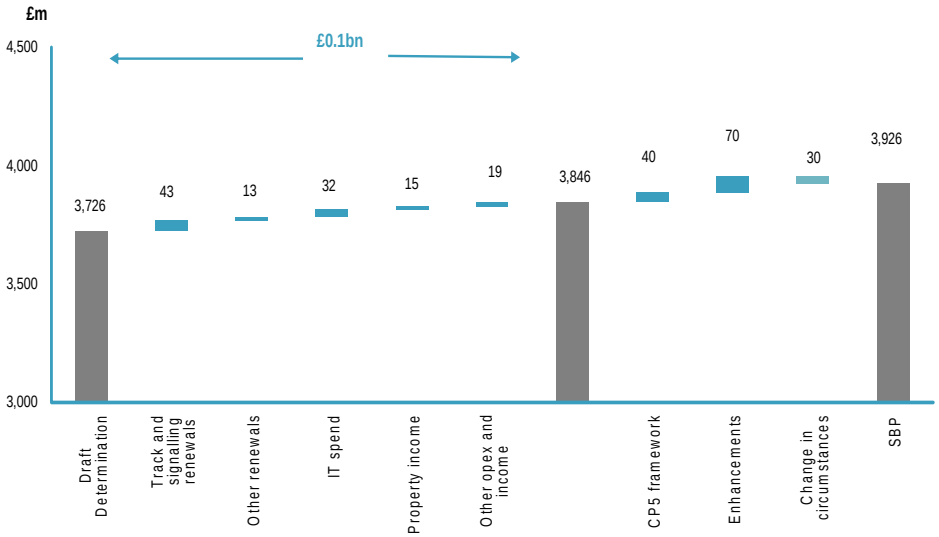
The amendments that have been made as a result of changes in circumstance since the SBP include a reduction in electric traction costs (£523 million) offset by the impact of increased Schedule 4 rates (£419 million), and the impact of the revised cost of capital on future facility charges, stations and depots income, and amended freight forecasts (£150 million). This is a net reduction of £46 million.

We have also carried out the above analysis for England & Wales and Scotland separately and this is shown in the graphs below.

Changes in planned England & Wales expenditure



Changes in planned Scotland expenditure



The increases in operating costs and other income result in an increase of £513 million in the CP5 revenue requirement. On the basis that renewals expenditure is added to the RAB, the total expenditure increase results in increased financing costs of £134 million. The way that the assumed expenditure translates into our revenue requirement also depends on assumed interest costs and the approach to amortisation. The assumed interest costs are lower than in the SBP reflecting our hedging strategy and current market conditions but they are still £689 million higher than assumed by ORR in the Draft Determination.

Implications for access charges, grant and debt

In considering the funding implications of a realistic efficiency challenge in CP5, it is critical that the implications for long term financial sustainability are also understood and that we do not increase debt unnecessarily. In the current circumstances, we assume that it would not be possible to increase our revenue requirement sufficiently to allow for the increased expenditure in CP5 and that we would need to raise additional borrowing to continue to fund the required investment. However, we are keen to work with ORR in discussing longer term funding models with government.

We continue to stress the importance of sufficient balance sheet headroom and the need to consider this in the context of longer term sustainability of the funding model. However, we do not believe that, for CP5, the appropriate level of the debt to RAB ratio can be considered in isolation from other measures of financial sustainability. We believe that it is necessary to consider different metrics for different purposes. For example, the ability to withstand operational shocks is more closely related to the absolute level of equity; and the ability of funders to afford future RAB payments is more closely represented by the ratio of the RAB to farebox.

The focus of our response is on the overall revenue requirement for CP5. We have not discussed with ORR the profile of revenue during CP5 and the resulting annual profile of profit. It is likely that a change in profile would result in a more "normal" profile of profit than would result from the Draft Determination. We will therefore discuss the potential reprofiling of income which would take into account the impact on our financing costs so that there was no change in our overall economic position. The precise adjustments will clearly depend on the expenditure and other assumptions underpinning the Final Determination.

Appendix 1

This sets out a comprehensive response to all aspects of the Draft Determination

- Background and context
- Output framework
- Overview of efficient expenditure
- Support expenditure
- Traction electricity, industry costs and rates
- Operations expenditure
- Asset management: maintenance and renewals expenditure
- Enhancements expenditure
- Deliverability of engineering work
- Health and safety
- Financial framework
- Impact of financial framework on financial parameters
- Access charges
- Other single till income
- Financial incentives
- Possessions and performance regimes

Chapter 2: Background and context

Para.	Topic	ORR Statement	Network Rail's Response
2.56	Impact of HS2 on plans for CP5	Our draft determination does not specify any outputs in respect of the construction of HS2. However, it does specify a development fund for enhancements in CP6 that is intended to include, in part, necessary development work for the linkage of the existing network to HS2. We would expect Network Rail in CP5 to ensure that, when renewing and enhancing its network, it takes account of potential connections and interfaces with HS2 to ensure that costs in the longer term are minimised.	High Speed Two (HS2) will have a significant impact on our plans for CP5. As currently planned, Royal Assent would allow work on site to commence from 2015. Significant reduction in platform and approach track capacity and changes to the station throat at London Euston will significantly reduce operational flexibility during construction, anticipated to last 10 years. Reliability, capacity and network availability will be materially affected on the WCML as a result with consequential negative impact on PPM for train operators. HS2 will also impact reliability, capacity and availability on other parts of the network due to construction works including the GWML (works at Old Oak Common) and elsewhere on the LNW route (works in the Birmingham – Washwood Heath area). Renewals plans for many asset types will need to be amended to take account of delivery of HS2. Whilst we recognise there will be significant impact from HS2 on the delivery of outputs in CP5 and our longer term plans, the HS2 programme is insufficiently developed at this time to allow us to reflect these impacts in our forecasts for CP5 and the longer term. Once the impacts of HS2 are better understood, we will need to reflect these in our forecasts and seek change control to the output forecasts for CP5 where appropriate.

Chapter 3: Outputs Framework

Para.	Topic	ORR Statement	Network Rail's Response
3.42	Additional England & Wales performance outputs	Network Rail's phasing to deliver HLOS assumes a CP4 exit level of 92.5% for PPM (MAA) and 2.2% for CaSL (MAA). Based on our own analysis and Network Rail's latest forecasts, the entry point into CP5 is likely to be lower than stated in the SBP.	Following further planning work and review of2013/14 performance, we are now proposing a CP4 exit level of 91.1%, consistent with the current forecast.
3.43	Additional England & Wales performance outputs	Therefore, we have decided to set the annual outputs for PPM and CaSL in Table 3.4 below, which reflect the lower CP5 entry point.	We accept that the start point should be lower than expressed by the SBP but we are concerned that the suggested figure is still higher than the JPIP position, and current forecasts.
3.46	Additional England & Wales performance outputs	On balance we have decided not to maintain the sector level outputs. However, performance at a sector level will be reported as an 'indicator' for CP5 as we see benefits of being able to group operators together to provide an interim level between train operators performance and national performance.	NTF and DfT do not consider sectors a meaningful data set. We challenge that this is not needed.
3.46	Additional England & Wales performance outputs	During CP4 we concluded that it was most effective to focus on and hold Network Rail to account for delivery of the measures that most closely reflected the passengers' experience – PPM and CaSL. However, delay minutes are a useful measure for identifying performance trends and should continue to be reported as an indicator	We should use delay minutes as an indicator but note that the relationship between delay minutes and PPM / CaSL is dynamic and we will need to keep under review our understanding of this relationship at a network and route level during CP5.
3.52	Performance of individual TOCs	We have decided that there should be a minimum point such that no franchised TOC in England & Wales exits the control period with a PPM (MAA) of less than 90%; this will be an output and is consistent with our CP4 determination which was based on getting all TOCs to 90% (although this will not be achieved). A minimum level of 90% would not significantly impact on the CP5 national output level as the poorest performing TOCs run relatively few services and therefore have a relatively small impact on national PPM.	We challenge the setting of a 90% PMM threshold as it is not value for money and does not reflect the desires of our customers and funders. As agreed at NTF, the setting of this threshold does not reflect the appropriate level of performance to achieve for a number of operators and the lack of flexibility will constrain the industry from achieving this. Network Rail and NTF consider the most appropriate approach to setting train operator level output commitments is through the JPIP process with the commensurate two per cent threshold of successful delivery.
3.55	Performance indicators	We have concluded that the following data should be reported each period to enable the understanding referred to above: (a) delay minutes, split by category (including Network Rail on TOC, TOC on self and TOC on TOC) for National, England & Wales, sector, Network Rail route and JPIP; (b) PPM by sector and service group; (c) CaSL by sector and service group; (d) PPM and CaSL at TOC level (annual as an output); (e) right-time performance by England & Wales, sector and JPIP; (f) average lateness by England & Wales, sector and JPIP; and (g) freight delay minutes, nationally and by strategic freight corridors.	The volume of data requested is overwhelming and adds little value beyond what we already provide to the ORR. The data we currently provide has been used successfully to assess current performance decisions on the network. The frequency of the reporting requested (i.e. on a periodic basis) is also considered burdensome. As much of the information requested (e.g. right time performance) relates to TOC performance and the TOCs see published performance as commercially sensitive, the level of granularity that the ORR is looking to publish needs to be agreed with the industry.
3.56	Performance indicators	We require Network Rail to publish data related to these measures in a transparent and accessible manner. Network Rail should set trajectories for all the above indicators at national level (this could be done in its JPIPs or FPIPs). The trajectories will not constitute outputs, but variation from a trajectory may indicate a trend which raises regulatory concern about likely future compliance with an output.	The use of FDM / PPM / CaSL / delay minute forecasting at TOC level is adequate and we will report against the proposed measures at an appropriate level. Please also see §3.55

Para.	Topic	ORR Statement	Network Rail's Response
3.61	Performance in Scotland	We are working with Network Rail, Transport Scotland and the Association of Train Operating Companies to develop a package of indicators to monitor performance in Scotland. The full package will be confirmed in our final determination, but will include: (a) right time performance and PPM for ScotRail and ScotRail service codes; (b) right time performance and PPM for long distance TOCs (Caledonian Sleeper services), peak time commuter services (heavily used and intermediate stations) and the 100 most heavily loaded trains; and (c) trains run (normal plan, amended plan, actually run) during severe disruption.	Working with other industry partners, we have developed a supporting package of KPIs that focus on the passenger and overall journey experience. The additional KPIs include measures for PPM at key passenger station interchanges, monitor worst performing trains and focus on heavily loaded trains. All of the additional KPI measures are designed to drive improvements for various passenger groups. The KPI report has gone through a number of refinements and some of the proposed definitions have had to be changed as a result of data difficulties. The report is now being used at monthly meetings and actions are being progressed. Based on the experience to date, alterations to the look and feel of the report will be made in the coming months. Further joint discussions are planned at both working and senior level over the next few months. The design of the KPIs will be finalised by January 2014 in conjunction with all parties to commence live use from the start of CP5. For the Caledonian Sleeper franchise it has been assumed that, in line with other long distance operators, PPM for the franchise will be based on 0-10.
3.75	Freight performance	FDM is a new metric and it will be important that we monitor it particularly carefully. We intend to use a number of supplementary indicators, including the CP4 measure (Network Rail caused freight delay per 100 train kilometres). We will also define other indicators to measure FOC caused delays. These indicators will not form regulated outputs, but are designed to provide information on areas which are not fully reflected in the FDM and act as a check against any perverse behaviour that might result from strategies designed to drive improvements against the FDM.	We are working with the Freight Joint Board to recommend indicators to the ORR.
3.79	Enhancements	For projects at an early stage of development the regulated outputs in the March 2014 delivery plan will be to achieve GRIP 3 (see Table 9.2). After that they will be changed to the delivery milestones when these are defined. Detailed outputs of the enhancements projects are dealt with in chapter 9 alongside efficient costs, as the two are closely linked.	We welcome this proposal, but further discussion is required as to how precisely this process will work.
3.82	Health and safety outputs	We are setting one output for level crossings. Network Rail is required to deliver a plan of projects in CP5 to achieve the maximum possible reduction in risk of accidents at level crossings using the £67m ring-fenced fund made available by the Secretary of State. This is in addition to Network Rail's legal duty to reduce risk so far as is reasonably practicable.	As agreed in principle with ORR, we will set out and jointly agree the approach for targeting investment to improve safety across the level crossing portfolio.
3.84	Health and safety outputs	Network Rail has said it will use RM3 along with other measures to determine the success of its safety and wellbeing strategy, but has not explained what other measures it will use. We will continue to use RM3 as an enabler as the information used by the model is generated through our inspection work.	We understand ORR inspectors will want to use RM3 as an indicator for the purposes of health and safety regulation and will set out our approach to internal safety performance monitoring in our delivery plan.
3.91	Network availability	Despite the concerns around the complexity of PDI measures they appear to have delivered their objectives. Disruption to passengers and freight has reduced, as a result of initiatives such as multiple worksites in single possessions and enhancement of diversionary routes. Passengers have also seen a reduction in rail replacement bus hours throughout CP4. Also, despite much discussion of alternative measures no robust alternative has been put forward. Given the direct impact on passengers and freight customers, we have decided to retain PDI-P and PDI-F as outputs, and set CP5 exit outputs for both measures. Network Rail's forecasts are reasonable given the enhancements and renewals planned for CP5, and we are setting outputs at these levels: CP5 exit for PDI-P of 0.539 and a PDI-F of 0.593	We have provided an update of the PDI forecasts in our response to the Determination. These forecast can be seen in the Network Availability supporting document along with the assumptions behind them. The trajectories will be refreshed again when we publish the Draft Delivery Plan in December 2013.

Para.	Topic	ORR Statement	Network Rail's Response
		(equivalent to a 14% reduction in passenger disruption and a 33% reduction in freight disruption, between 2014-2019, based on Network Rail's forecast CP4 exit). In their response to this draft determination, Network Rail must confirm (by 4 September 2013) if these forecasts have changed in light of our decisions on enhancements and renewals. We will confirm whether any such changes alter the CP5 outputs, in our final determination. Annual forecasts should be agreed between Network Rail and the industry.	
3.103	Stations and depots	SSM has been reviewed by the Part A independent reporters for data assurance (Arup) three times in CP4. Data quality has improved from a C4 (significant shortcomings in the system and data is accurate to 25%) to a B2 (minor shortcomings in the system and data is accurate to 5%), but is still below our A1 (system is reliable and data is accurate to 1%) data quality expectation. We expect SSM to achieve A1 data quality by April 2017 (see Table 3.8).	See the main body of our response, '*The regulatory regime is more intrusive and complex than is regarded as appropriate in other sectors'.*
3.106	Stations and depots	Stations are a key passenger interface, and a determinant of passenger satisfaction on the railway. Station condition is also a potential safety concern and poorly maintained stations can present a risk to passengers. We therefore view station condition as very important and have decided to retain SSM as a regulated output in CP5. We require Network Rail to maintain station condition at anticipated CP4 exit levels and achieve the SSM figures they have provided to ORR (see Table 3.5 below) in their SBP clarifications.	The Draft Determination proposes a substantial reduction in franchised station expenditure from the SBP. The SSM projections set out in the SBP cannot be achieved with this lower level of funding – either the funding needs to be increased or the output target lowered. See also the main body of our response, '*The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified*'.
3.116 to 3.132	Asset management issues		See the main body of our response, '*The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified*'.
3.138	The environment	While we are not setting environmental outputs for CP5, we do want to know – and we expect Network Rail to want to know – whether the company is setting itself ambitious and stretching targets. The Secretary of State's HLOS stated the "industry should also set out plans for embedding the rail industry's Sustainable Development Principles and measuring and reducing the carbon embedded in new infrastructure, throughout the lifecycle of programmes and projects. This should include the use of a suitable carbon accounting methodology". We will monitor Network Rail's asset policies and programme / project planning, to ensure this requirement is met.	Sustainable Development (SD) is incorporated within the strategic goals that underpin our Long Term Planning Process for the railway. These are: enabling economic growth; reducing carbon and the transport sectors' impact on the environment; improving the quality of life for communities and individuals; improving affordability. In addition we are developing guidelines for embedding SD within our asset policies and project delivery processes, and will have made demonstrable progress embedding these by March 2014. We will establish a methodology and accompanying process to monitor and seek to reduce the carbon embedded within significant infrastructure projects by March 2014. We will monitor the value delivered by this approach and scale our use of the methodology accordingly through CP5. We are implementing a system to collect and report a range of SD metrics by March 2014. We will set out our initial metrics (KPIs) in the Draft CP5 Delivery Plan We will identify the functions and key roles within Network Rail's organisation, critical to the achievement of the SD Strategy and include these in Network Rail's Integrated plan by December 2013. This will provide the foundation on which to further develop our plans to deliver

Para.	Topic	ORR Statement	Network Rail's Response
			Network Rail's long term sustainability objectives
3.141	The environment	We expect Network Rail to address the recommendations in Arup's report before the revised carbon emission and intensity forecasts are published in its delivery plan. Network Rail's carbon reduction forecasts must also support the industry's goal of an absolute reduction in traction CO2 emissions of 12% by the end of CP5, and a reduction in carbon embedded in new infrastructure.	We will continue to support industry planning and delivery of traction carbon improvements. Key recent activities include: supporting the development of CP5 targets; supporting the installation of on train metering; implementing a billing system that utilises this real time consumption information; and, most critically, continuing to progress our plans for electrification. As described above we will establish an approach to managing the carbon embedded in our infrastructure projects. We will also continue to innovate with low carbon materials and products – for example our work developing low carbon concrete sleepers. We will respond to the recommendations contained in the Arup review of our CP5 carbon trajectory as follows: CRC01 – We will include latest Department of Energy and Climate Change (DECC) factors in CP5 Delivery Plan carbon trajectories CRC02 – We will include scope 3 emissions in the scope of the SD metrics tool we are implementing. See also embodied carbon response above CRC03 – We will develop a suite of carbon/energy intensity metrics to monitor and report our performance (where appropriate data is available). We will include these in the scope of the SD metrics tool CRC04 – We will update our scope 1 and 2 carbon emission forecast to include appropriate efficiency measures CRC05 – We will revisit the existing our understanding of the drivers for change in our scope 1 and 2 carbon emission forecast and improve the robustness of this analysis for priority areas of uncertainty
3.150	Decisions on other areas System operator capability	We expect that an illustrative dashboard will be drawn up and agreed between Network Rail and ourselves in time for inclusion in the final determination. The dashboard will measure Network Rail's system operator performance, which will be an enabler in CP5. The exact content of the dashboard will be consulted on by Network Rail as part of its December 2013 draft delivery plan. We will expect Network Rail to publish its performance against the measures on an annual basis throughout CP5. Once we have a track record of data we will consider whether the dashboard needs to be refined, to ensure it accurately measures Network Rail's system operator progress.	An illustrative dashboard is being agreed between Network Rail and ORR. The contents of this dashboard is being consulted on by Network Rail and an updated version of it, taking into account the consultation responses, will be included in our draft CP5 Delivery Plan.
3.151	System operator capability	Our ultimate aim is to establish, in the course of CP5, whether we need to develop specific incentives to drive improvements in performance in aspects of the system operator functions.	We support in principle the implementation of incentives, whilst seeking to avoid potentially perverse and/or conflicting impacts of incentives in other areas.
3.154	Programme management capability	We have therefore decided to include an enabler that measures Network Rail's effectiveness in programme and project management capability. We will confirm the metric in our final determination.	There will be a phased roll out of P3M3 across Network Rail, starting with IP. Assessments and improvement plans will be developed and conducted with a qualified 3rd party. Timelines will be determined based on their recommendation. Plan to be shared with the ORR in March 2014.
3.157	Customer service maturity	Network Rail has been developing an appropriate model for measuring its overall level of customer service maturity in CP5. It has committed to establishing a trajectory for its customer service maturity in its SBP.	The principal way of measuring customer service in CP5 remains the annual satisfaction survey of train operators. Nevertheless, we are

Para.	Topic	ORR Statement	Network Rail's Response
		We support this approach and believe that the model that it is developing will provide a much fuller picture of the level of service delivered to its customers than its annual survey alone. However, the SBP did not specify any detail as to how it proposed to do this.	continuing to develop a set of measures which will give us a more comprehensive understanding of customer service maturity, supporting our becoming a more customer focussed organisation, one of our key strategic themes. A research phase confirmed that a maturity model underpinned by quantified and trackable measures would be an innovative approach for assessing customer service. Early engagement with a number of customers has been undertaken, to develop an effective model for measuring Network Rail's ability to deliver customer service. In our CP5 Delivery Plan in March 2014, we will publish a baseline (the CP5 starting point) of CP5 measures as of 1 April 2014, and through review and stakeholder engagement we will validate this baseline during the first year of CP5 to confirm the 1 April 2014 starting point and a trajectory for the end of CP5. Customer service improvement actions will be identified and developed by accountable teams across the organisation on an ongoing basis in CP5 It should be noted that the baseline (and the final definition of some of the measures) is unlikely to be available by the time we consult on our CP5 Delivery Plan in December 2013.
3.160	Customer service maturity	We require Network Rail to develop a customer service maturity model, with trajectories and action plan. Network Rail will use the model to baseline performance as of 1 April 2014, and the model will be an enabler for excellent customer service maturity throughout CP5.	See response above.
3.166	Journey time	In our outputs consultations we said it is important that performance improvements must not be achieved at the expense of journey times. We acknowledged that developing a metric would be challenging, but nevertheless advantageous given the funds committed to journey time reduction. In its response, Network Rail said a journey time indicator would be complex, but a metric linked to improvement funds could be considered. We will work with the industry and funders to develop a journey time metric.	We are developing a journey time / velocity metric that would be flexible enough to suit a number of purposes. We are examining how best to align the system operator dashboard measures with related elements of the customer service maturity measure, NPS, and our proposed journey time metric and will consult on this in our CP5 Delivery Plan.
3.167	Journey time	Transport Scotland also emphasised that a process needed to be established so that Network Rail takes advantage of opportunities to reduce journey times, for example when carrying out renewals work. We will monitor Network Rail's progress in this area.	There is a process for line speed improvements, which has previously been shared with ORR, that is in place for CP4 and will continue in CP5. The application of the journey time / velocity metric referred to above could be used to demonstrate the impact on journey times and we will continue to discuss this with Transport Scotland as appropriate.
3.171	Cross-border service availability	We have decided that the availability of a cross-border route (as described in the Scottish Ministers' HLOS) will be an indicator. Network Rail must use all reasonable endeavours to keep at least one cross-border route open at all times, but we recognise that this may not always be possible. We will review this requirement throughout CP5 and discuss with Transport Scotland, DfT, and Network Rail.	We propose to ORR and TS that the existing process for informing TS of the availability of a cross border route continues through CP5. There is little benefit in introducing an indicator.

Chapter 4: Efficient Expenditure

Para.	Topic	ORR Statement	Network Rail's Response
4.22	High level approach for PR13	One issue that we may need to consider further is that it is not clear how much of Network Rail' efficiencies can come from alliances and other industry initiatives.	In CP4, we have entered into nine alliance arrangements, including one deep alliance. We anticipate that further alliance arrangements will develop throughout CP5, particularly as a result of the refranchising schedule. The efficiency plans detailed in the SBP are predicated upon our ability to work more closely with our partners.
4.25	Cross cutting issues	We have carried out an analysis of possible savings for each area of expenditure. But there are some potential savings – the management of inflation, input prices, frontier shift, employment costs and occupational health – that could apply to all areas of spend. We have termed these 'cross-cutting' issues and this section explains how we have treated these issues.	It is not valid to apply cross-cutting efficiencies or frontier shift for the following reasons: **Operations and Support** The Draft Determination for operations and support has been made in reference to a top-down estimate of efficiency based upon the CEPA/OXERA analysis. Whilst we have serious concerns with how this top-down assessment has been applied to individual elements of spend (see §5.17 and §7.28), it is also the case that the CEPA/OXERA estimate already accounts for frontier shift and all elements of efficiency (such as occupational health or inflation management). To apply other overlays on top of this top-down assessment is not appropriate – especially given that the Draft Determination efficiency figure for operations and support is already well in excess of the CEPA/OXERA estimate (24% vs 17%). **Maintenance and Renewals** The maintenance and renewals efficiency profiles in the SBP and in the Draft Determination are all based on comprehensive bottom-up assessments of the limits of how much we can change our ways of working in CP5. They already account for emerging developments in technology and incorporate significant elements of stretch (notably in signalling and maintenance). It is not methodologically consistent to include top-down overlays in addition to a thorough bottom-up assessment by either ORR or ourselves. Additionally, in the case of renewals expenditure, both of these issues sit largely outside our control. For the most part they are within the remit of the contracting base that we rely upon to carry out the works. Any advances in these areas will be accounted for in the rates envisaged for CP5. See also §8.317.

Para.	Topic	ORR Statement	Network Rail's Response
4.31	Cross-cutting issues Network Rail's management of inflation	As a result of the study (Credo), we have made adjustments to our efficiency assumptions to reflect the impact on Network Rail's costs from an improvement in Network Rail's management of inflation. We recognise that it is possible that our other analysis of Network Rail's efficient expenditure may already include some of the savings from improved management of inflation. As such, at the moment we have taken a conservative view of the potential efficiencies that can be realised and applied a 0.2% per annum increase to our efficiency assumptions across Network Rail's CP5 support, operations, maintenance, renewals and enhancement costs.	Please see the main body of our response.
4.38	Input prices	Given the following considerations, we have decided to make no explicit adjustments to our efficiency assumptions for input price inflation: (a) the uncertainty in forecasting and measuring input price inflation; (b) Network Rail has assumed a low level of input price inflation over CP5 on renewals and no input price inflation over CP5 on support, operations and maintenance costs; and (c) our approach to funding risk, i.e. in our financial framework not providing Network Rail with upfront funding for risks.	We made a judgement on the renewals input price inflation based on different methods particularly by looking at the construction sector. Each analysis carried out on input price inflation is subject to assumptions and uncertainty. We believe that a closer analysis of the contents of the comparator sectors and the nature of the activities carried out during renewals was useful in a reassessment of the appropriate comparator group. The construction industry has strong similarity with NR renewals work. Moreover, regulators have historically made an allowance for input prices in the capex delivery arms of regulated businesses to rise faster than the input prices implicit in the RPI. There is precedent suggesting that real price effects impacts renewal expenditure both in the railway industry and in the current economic climate. There is substantial evidence of a historical premium to RPI which suggests that NR renewals expenditure will experience a real price effect in CP5 potentially supported by a steep economic recovery.
4.40	Input prices	However, we are still adjusting Network Rails access charges, network grant and RAB for changes in RPI, as we do not think general inflation is efficiently controllable by Network Rail.	We welcome this. We note ORR's proposal to change the approach to uplifting charges for inflation in its PR13 Implementation Consultation. We have commented on this in our response to the PR13 Implementation Consultation.
4.45	Frontier shift	Our overall estimate for frontier shift, based on CEPA's analysis undertaken on our behalf (and their subsequent update) is 0.3% per annum which equates to 1.5% for CP5 as a whole101. This adjustment could apply to Network Rail's total expenditure, including support, operations, maintenance, renewals and enhancements.	As detailed in §4.25, it would not be appropriate to apply frontier shift to operations, support, maintenance or renewals. However, in respect of the estimates themselves, they have been produced by different analyses and are subject to uncertainty. Our own analysis suggests that the values are more likely to be: 0.2% for support and operations (by removing the capital substitution adjustment used in CEPA) 0.1% for renewals (construction sector as a more appropriate comparator). We have used these values to inform our SBP submission, and the effects of frontier shift have already been accounted for in our projections. It is not therefore valid to apply a further adjustment in the Final Determination.
4.50	Employment costs	Our determination sets the overall package for Network Rail in CP5. In most cases, it does not state how Network Rail should spend the revenue that it is allowed to recover, e.g. the level of remuneration for its employees or how it should achieve its efficiency savings. The study has reinforced our view that there are	The IDS study looks at the remuneration trend from 2007 to 2012 on a per employee basis but doesn't examine staffing levels of Network Rail and therefore isn't able to provide a view on staff output or the number of staff

Para.	Topic	ORR Statement	Network Rail's Response
		significant savings that Network Rail can deliver in CP5 but we have not explicitly adjusted our efficiency assumptions for the findings of the IDS study because overall our efficiency assumptions are already challenging but achievable.	that should be employed. Consequently it doesn't factor into the benchmarking comparison the efficiency savings made to date and those planned for CP5.
4.55	Occupational health	In our determination we have, currently, applied a conservative increase to our overall efficiency estimates of approximately 0.07% per annum across Network Rail's support, operations, maintenance, renewals and enhancement costs to reflect the savings which could be achieved through improvements in occupational health, for example in reducing absenteeism. This amounts to approximately £20m of savings in the final year of CP5.	ORR has indicated in its Draft Determination that we should be expected to achieve efficiencies of £70m over CP5 through improved management of occupational health. We disagree strongly with the validity of applying this overlay because, taken as a whole, our expenditure plans already contain a significant element of stretch. Areas such as occupational health are one of the means by which we would seek to achieve our as yet unidentified saving. Additionally, we do not believe it is valid to apply an efficiency overlay to plans that have already been generated by us and confirmed by ORR using bottom-up approaches, such as for renewals and maintenance. Nor is it valid to apply the overlay to areas that have been moderated against a total expenditure benchmark, such as operations and support that have been compared to the OXERA/CEPA reference efficiency figure. Please refer to §8.317 and §4.25 for further details. Regarding the substance of the target itself, having consulted with internal experts and engaged external third-party experts in occupational health, we have found that this efficiency target is unrealistic, impossible to prove conclusively and is likely to be counter to our aims of establishing an open and honest culture relating to employee health and wellbeing. The below sets out the main arguments supporting the above statement: (1) Currently, there is little dedicated budget for proactive interventions to achieve improved health and wellbeing within the business. In order to reduce the risk of occupational health conditions, there is a clear requirement for investment in new technology and processes and it is therefore unrealistic to set short-term efficiency targets (i.e. within the space of one control period) when proactive investment is required (the benefits of which are unlikely to be seen in the short-term, as noted below). (2) Unlike safety risks, which can show an immediate reduction in risk and occurrence of incidents, the development of health conditions has a generally long latency period. As such, any changes or improvements made in working practices now would show as reduced diagnoses of health conditions over the next five to fifteen years – but it is highly unlikely to become evident within the next one to five years. It is therefore unrealistic to expect changes in working practises to have an immediate effect on health diagnoses (and therefore costs), as the diagnoses that are made over the next few years will be heavily influenced by historical working practises.

Para.	Topic	ORR Statement	Network Rail's Response
			(3) Based on a review of absence within Network Rail in 2012 undertaken by AON Hewitt (please refer to our supporting document, "Absence Rates Within Network Rail, Occupational health"), working time lost due to absence within our organisation was noted as totalling 2.9% of total working time, compared to 2.8% in CIPD comparable industries. Thus, our current absence levels do not indicate a significantly high level of absence compared to other organisations and it is therefore unrealistic to expect significant savings in absence costs. (4) Currently, there is low participation in occupational health surveillance processes throughout our organisation and our focus is to increase participation in these programmes over the next few years. As such, the expectation is to see an increase in identification of occupational health conditions over the short- to medium-term as we improve participation with our occupational health programme. It is therefore unrealistic to expect a reduction in occupational health costs at a time when our aim is to increase the number of people taking part (and therefore the likelihood of previously undiagnosed conditions being identified). (5) Related to the above is the potential damage to the cultural changes we are aiming to making relating to occupational health. Setting a steep efficiency target for the organisation risks creating a culture where potential signs or symptoms of occupational health conditions may be under-reported in order to meet efficiency targets. It is therefore unrealistic to expect this target to improve compliance with occupational health processes. (6) The expert views of our Chief Medical Officer and two Occupational Health Specialists, who have many decades of professional experience in occupational health between them, are all in agreement that the efficiency target is unrealistic and impossible to validate its scale. Dr. Martyn Davidson. Chief Medical Officer for Network Rail, notes that efficiencies may be made through reduced incidence of occupational health diagnoses and improved productivity, but that this will not happen in the short- or medium-term, whilst Alison Crawley, Occupational Health Specialist, notes that we should expect to see a likely increase in diagnoses in the short term due to improvements in the culture of health and wellbeing within our business. (7) It is difficult to understand accurately the efficiency target set by ORR without seeing the calculations they have used to reach this figure. It is possible that they have used their estimation of our absence costs and also factored in the estimated costs of 'presenteeism', which is the reduction in work performance caused by attending work during short-term acute illness (often assumed to equate to 1.5 to 2 times the cost of

Para.	Topic	ORR Statement	Network Rail's Response
			absence). However, this 'guesstimate' approach is extremely difficult to prove and to assess and no accurate and practical assessment of individual work-performance has been identified. Therefore, it is not possible to show the impact of improved health factors on work performance. Having taken the above into account, calculations based on the independent Aon Hewitt review of absence suggest that savings could be made by reducing our absence from its 2012 position of 6.5 days per person per year to the level of CIPD comparable organisations of 6.2 days per person per year. To achieve this reduction, it is estimated that additional expenditure of approximately £2.6 million per year will be required and will lead to a net saving of £4.7 million. However, we believe this scenario has a degree of risk associated with it as, for the reasons articulated above, we have a strong expectation that absence rates will get worse initially as our culture becomes a more open one in relation to health and wellbeing. In conclusion, we do not believe that this overlay should be applied in the Final Determination. If the overlay is retained, then the value should be reduced to reflect us moving to a position comparable with other industries, in which £4.7m is saved over the course of CP5, not £70m.
4.56	Occupational health	Network Rail must put in place an effective health programme. But its biggest challenge is to induce a culture change within the organisation to encourage engagement in its occupational health programme. This efficiency assumption will provide an appropriate incentive.	We disagree strongly with this assertion. See point (5) in §4.55 above.
4.61	Efficient expenditure assumptions support costs	Our assessment of efficient support costs for CP5 assumes that Network Rail can achieve efficiencies in core support costs of 20% by the final year of CP5 and a reduction in total support costs of 25% by the end of CP5. Overall there is a saving of £647m in CP5 compared to total CP4 support costs of £2,740m.	See §5.17.
4.65	Operations costs	Our assessment of Network Rail's efficient operations costs in CP5 assumes that Network Rail can achieve 17% efficiencies by the final year of CP5. This is a saving of £271m in CP5 compared to total CP4 operations costs of £2,239m.	See §7.28.
4.72	Maintenance and renewals	We assume that Network Rail can achieve maintenance efficiencies of 16.5% by the final year of the control period. We assess that it needs to spend £5,152m on maintenance during CP5, £91m less than proposed in the SBP.	See §8.318.
4.73	Maintenance and renewals	Our assessment of efficient renewals expenditure for CP5 assumes lower levels of pre-efficient expenditure where its plans were not sufficiently justified or where we are proposing a different approach. For example, we have reduced pre-efficient plans for issues identified in unit cost calculations and made reductions to buildings, information management and R&D expenditure. We assess that Network Rail can achieve renewals efficiencies of 20.1% by the final year of the control period. We assess that Network Rail needs to spend £12,173m on renewals during CP5. This is £1,618m less than proposed in the SBP.	See §8.318 and §8.442.
4.75	Enhancements	Of the £12.4bn costs in Network Rail's SBP, there were about £3.2bn of costs for projects determined outside of the review (Thameslink, Crossrail, Borders and an element of EGIP103) and £1.3bn of costs for ring-fenced funds. We scrutinised the remaining £7.9bn which we reduced to £7.2bn, largely as a result of	See §9.41.

Chapter 5: Support Expenditure

Para.	Topic	ORR Statement	Network Rail's Response
5.17	Efficient support costs	We have based our assessment of Network Rail's CP5 support costs on the combined/hybrid approach. This means that where Network Rail has provided robust analysis of its functions costs, we have used Network Rail's forecast of costs. However, where Network Rail has provided insufficient justification for its forecasts, we have applied a top-down efficiency assumption to our view of Network Rail's pre-efficient costs.	The methodology of applying a top-down assumption derived from consideration of *the whole* of support and operations costs to individual components of the cost is inappropriate. It cannot be assumed that efficiency derived from a consideration of the whole is evenly distributed between each individual component. To do so creates an unbalanced view across the whole picture of support costs. The top-down analysis must either be taken as a whole, in which case it applies to the sum of all our support and operations costs, or not at all. Selectively targeting individual components to apply the total level of efficiency to is using the analysis for a purpose for which it was never intended. Indeed, applying the top-down CEPA/OXERA profile across the whole would add an additional £170m of funding compared to the Draft Determination assumptions on support, even allowing for the additional effect of the cross-cutting efficiencies (see supporting documents for this calculation). ORR's selective application of the profile therefore is not consistent with the number the profile gives in its proper context for the whole of the support function. It should also be noted that application of the CEPA/OXERA profile as a whole in this way takes the support number higher than our SBP assumptions. See also §4.25 and §7.28.
5.33	Efficient support costs	In support of our assessment of Network Rail's support costs in CP5, we have considered…(f) the additional overlay for Network Rail's management of inflation and occupational health	We disagree with the application of the cross-cutting efficiencies to support. To do so is not consistent with the principle of top-down analysis. Top-down analysis of the type carried out by CEPA/OXERA is a total expenditure assessment that accounts for the limits of how efficient the business can realistically become over the course of CP5. To include additional efficiencies related to specific subject areas is not appropriate because by definition they already form part of the CEPA/OXERA figure. By the same principle it would also be inappropriate for the Final Determination to apply an additional efficiency element for frontier shift. This is also already accounted for in the CEPA/OXERA profile. See also §4.25 and §7.28.
5.18	IM opex	Where Network Rail has provided insufficient justification for its forecasts, we have applied a top-down efficiency assumption to our view of Network Rail's pre-efficient costs.	Please refer to *The proposed level of expenditure on information technology is inadequate* in the main body of our response.
5.18	Legal services opex	Where Network Rail has provided insufficient justification for its forecasts, we have applied a top-down	We disagree that any further efficiency can be achieved from legal

Para.	Topic	ORR Statement	Network Rail's Response
		efficiency assumption to our view of Network Rail's pre-efficient costs.	services opex. Through CP5, the degree of business change will drive an increase in the need for legal support in areas such as alliancing, concessions, Dime, potential joint ventures and HS2. Devolution has also created greater demands on this resource. Meaningful reductions in the legal services budget can only be achieved through headcount reduction. This would mean we would be unable to manage legal risk appropriately and would lead to greater external spend to fill the void created through loss of headcount.
5.18	Other corporate functions	Where Network Rail has provided insufficient justification for its forecasts, we have applied a top-down efficiency assumption to our view of Network Rail's pre-efficient costs.	Other corporate functions spend comprises spend allocated to the Board. This spend is crucial in enabling our strategic leadership to function effectively. Our SBP assumptions already assume an efficiency of 1 executive and 1 PA.
5.18	Network Rail telecoms opex	Where Network Rail has provided insufficient justification for its forecasts, we have applied a top-down efficiency assumption to our view of Network Rail's pre-efficient costs.	We acknowledge the removal of redundancy cover in the telecoms opex budget.
5.29	Insurance	We commissioned Willis (an insurance broker) to review Network Rail's proposed annual insurance costs for each year of CP5 to consider whether Network Rail's overall insurance strategy is appropriate and whether its proposed insurance costs are efficient, e.g. are there some risks that Network Rail could manage more efficiently than it is proposing? Willis concluded that Network Rail's overall approach to insurance costs is efficient. However, it identified some aspects of its insurance cover where Network Rail may not take an efficient approach. DD text §5.17 and §5.35	Please refer to *The proposed efficiency for the management of inflation is unprecedented and unrealistic* in the main body of our response. We estimate this increased cost resulting from the increase in schedule 4 and 8 rates to be about £5m on the following basis. During ORR's review of insurance in the SBP, we estimated that the annual business interruption insurance cost on our external insurance for each year of CP5 was around £1.85m, on the existing performance regime rates. Using a calculated assessment of an average increase in exposure level of 55% for Schedule 4 costs in CP5, this would lead to an increase in the annual cost by about £1m per year.
5.35	Base year	These adjustments, resulting in a reduction in costs of £45m, include: (a) a reduction in one-off incomes/costs in 2013-14 (£15m); (b) a reduction in contingency (£26m) as we are not providing specific contingency for support costs in CP5 and Network Rail can use its balance sheet buffer to manage the risks involved with this expenditure; (c) a reduction in CP4 funds (£11m), this is expenditure on the performance fund and the seven day railway fund in 2013-14), which is not needed in CP5; (d) a reduction in insurance costs to reflect a double count of Schedule 4 & 8 costs (£3m); (e) an increase in information management costs to reflect increase in support costs for the Traffic Management System (£5m) (Network Rail assumed £6m in its SBP); and (f) an increase in utilities costs (£5m), to correct an error in Network Rail"s forecast.	ORR's removal of contingency does not take into account the additional evidence that we provided on the need for redundancy costs to increase compared to SBP. Please refer to *The proposed efficiency for the management of inflation is unprecedented and unrealistic* in the main body of our response.
	Pensions		Please refer to *The proposed efficiency for the management of inflation is unprecedented and unrealistic* in the main body of our response.

Chapter 6: Traction electricity, industry costs and rates

Para.	Topic	ORR Statement	Network Rail's Response
6.3	Industry costs	Footnote 117: In the executive summary of this document, we show total CP5 traction electricity, industry costs and rates of £3,701m. The additional £77m compared to Table 6.1 reflects costs that Network Rail included in its SBP for the maintenance of assets transferred from British Rail Residuary Board (£10m) and to reflect its estimate of the costs it could potentially incur from the asymmetry of the route-level efficiency benefit sharing (REBS) mechanism (£67m), i.e. although it may meet our efficiency assumptions in aggregate, underperformance in some routes and outperformance on others could lead to a net payment from Network Rail to train operators. We have included no funding for these issues in our determination as we think our package is deliverable by Network Rail and it would be inappropriate for us to assume ex-ante that Network Rail will underspend in some areas of the package and overspend in other areas. Also, our understanding was that the effect of the transfer of British Rail Residuary Board assets should be neutral for Network Rail.	In its draft determination we note that ORR has not included any funding for the maintenance of the assets that will be transferred from British Railway Board (Residuary) Limited ("BRBR") to Network Rail on the basis that 'the effect of the transfer of the BRBR assets to Network Rail should be cost neutral' (see footnote 117 of the Draft Determination at page 141). In our letter to ORR of 21 January 2013 concerning the transfer of these assets, we advised that it was DfT's view that transfer would be cost neutral. However, we were careful to highlight that we had not seen any evidence that supported the assertion of cost neutrality or that we would be otherwise 'compensated' through the benefits received in owning the assets. We do not understand how this conclusion has been reached and are of the view that the majority of the assets that will be transferred are liabilities as opposed to assets that offer commercial or operational value. The three properties at Market Harborough, Hunslet and Glasgow do have an operational use and ORR has confirmed that these assets are captured within the definition of permitted business activities. We would also note that some of the structures sit above Network Rail's existing infrastructure and we will need to make sure that these structures are (and continue to be) structurally sound such that they do not adversely impact the operational railway. In the absence of any evidence from DfT to support its view, our position remains that the acquisition of these assets is not cost neutral. We therefore consider that it is vital that adequate funding is made available in ORR's final determination such that these assets can be appropriately maintained in CP5 and beyond. We continue to believe that the £70m figure for REBS asymmetry is a 'real' cost to NR of the design of the mechanism. If ORR does not decide to fund this cost in its Final Determination, we consider it should be prepared to do so as an OPEX memo account addition for the start of CP6.
6.17	British Transport Police costs	Overall our assumptions for BTP costs of £329m for Great Britain, £296m for England & Wales and £33m for Scotland are respectively lower than Network Rail's SBP forecast by £26m for Great Britain, £24m for England & Wales and £2m for Scotland.	Please refer to *The proposed efficiency for the management of inflation is unprecedented and unrealistic* in the main body of our response. BTP's response to the Draft Determination is also included as a separate supporting document.
6.18	The Railway Safety	We have considered Network Rail's SBP submission for the RSSB levy in CP5. Network Rail has provided	Please refer to *The proposed efficiency for the management of inflation is*

Para.	Topic	ORR Statement	Network Rail's Response
	and Standards Board (RSSB) levy	insufficient evidence of its forecasts for this area of cost and so we have taken Network Rail's forecast 2013-14 RSSB levy and applied the top-down CEPA/Oxera average to this forecast (average 3.7% efficiency gain per annum).	*unprecedented and unrealistic* in the main body of our response.
6.19	ORR licence fee and the railway safety levy	We have taken the 2013-14 licence fee and safety levy and converted them into 2012-13 prices to be consistent with our determination. The licence fee is paid only by Network Rail whereas train operators contribute to the safety levy, based on their turnover. For our assessment we have allocated a proportion of the safety levy to Network Rail using our 2012-13 allocation because the 2013-14 allocation is not yet known. For our determination we have assumed Network Rail pays the same ORR licence fee and the railway safety levy in each year of CP5 (a combination of the licence fee and its share of the safety levy) as we have forecast for 2013-14.	See appendix 2 – chapter 12 §12.43.

Chapter 7: Operations Expenditure

Para.	Topic	ORR Statement	Network Rail's Response
7.17	Review of the operations strategy management case	Review of the operations strategy management case: We found areas where we considered there was the potential to deliver excellence (level 5), in particular, governance, monitoring and review. Other areas were considered to be predictable (level 4) or standardised (level 3) with none at levels 1 or 2. These are summarised in Figure 7.2. We concluded that if performance in the excellent areas is maintained and improvements made in the other areas then the systems are capable of allowing successful delivery of the operating strategy programme. We also concluded that the way the programme has been planned and the systems developed offers Network Rail examples of excellence which should be shared through the organisation.	We welcome this.
7.28	Non signaller expenditure	Compared to other regulated industries within the UK we have concluded that the level of efficiency for non-signaller expenditure can be improved, so we applied our top-down efficiency assumption to these costs.	The Draft Determination proposes a very large increase in efficiency for non-signaller staff types. Our response to this is given in the main body of our response, *The proposed efficiency for the management of inflation is unprecedented and potentially unrealistic*. Please see also §4.25.
7.10		Reductions in signaller costs will happen when existing signalling control is transferred to the new centres as part of the operating strategy. While Network Rail has started to implement some of the elements needed, there remain a number of key dependencies affecting the rate of change, such as: the ability of Network Rail and its supply chain to complete the required signalling renewals; and the company's approach to redeployment and redundancy in consultation with the trade unions. Network Rail has devised a programme for staffing the operating centres that it considers is the most efficient approach taking account the constraints. This programme drives the rate of cost reductions and consequently the levels of efficiency it can achieve in CP5.	Please see main body of our response, *The scale and pace of change proposed is unrealistic and the Draft Determination is not a balanced package.*

Chapter 8: Asset Management, Maintenance and Renewals Expenditure

Para.	Topic	ORR Statement	Network Rail's Response
8.7	Reactive Maintenance	We present all CP5 expenditure on a slightly different basis to CP4. In CP5, works which have previously been treated as renewals expenditure, but which are associated with small scale works on buildings and civil engineering structures, will be treated as maintenance costs to align with Network Rail's statutory accounts. These works are termed "reactive maintenance". In its SBP Network Rail moved some of these costs from renewals to maintenance (approximately £250m over the control period associated with the Civil Engineering Framework Agreement (CEFA) contract, discussed later in this chapter). We have made a further adjustment to include all reactive maintenance costs as maintenance expenditure. We have assumed that reactive maintenance costs are 4% of total renewals costs and applied the adjustment as a high level overlay to be transparent. This results in a post-efficient movement of £507m from renewal to maintenance between the two control periods. We will refine this adjustment for final determination. To provide a valid comparison we have applied this to both Network Rail's figures and our own from CP5 onwards.	Please refer to the main body of the response, *The proposed efficiency for the management of inflation is unprecedented and unrealistic*.
8.24		We expect Network Rail's milestones associated with intelligent infrastructure to be set out fully in its delivery plan and will monitor delivery of these as indicators.	Noted. This will be addressed in our delivery plan.
Table 8.11	E&P Volumes	Table includes signalling power distribution volume of 2810 kms.	This figure is an aggregation of a number of different activity volumes and is not just km of signalling power cable. The correct figure, as shown in SBPT223 Renewals Expenditure Summary document, is 1,155.
8.226	Our assessment methodology – maintenance and renewals	Figure 8.5 shows that, for maintenance, policy development and central modelling has been carried out, but our assessment has found insufficient evidence of how these areas of work have fed into the final SBP submission. In particular, the line of sight between asset policies and maintenance plans presented in the SBP is not clear. The maintenance plans are largely based on projections of resource requirements that have not been demonstrated to be aligned with policy requirements. There has been limited challenge between centrally modelled cost and resource based cost forecasts. Network Rail has not demonstrated a robust route challenge to centrally derived efficiency initiatives.	We recognise that the transparency of the line of sight from asset polices to maintenance costs was limited in our SBP documentation, which did not include activity volumes in the route plans (though these were supplied later). However, this paragraph (and others in the document) does not accurately reflect the process of development of our maintenance plans, described in the supporting document SBPT 222 "Maintenance Activity and Expenditure" and discussed in a range of review meetings. In particular: • the SBP planning process was informed by our top-down modelling for each asset, with routes being provided with forecast volumes consistent with the application of our asset policies and forecast traffic growth; • the top down modelling made extensive use of the MUCs where appropriate; • while the plans were presented in a resource-based form, the resources requirements were based on the assessed level of activity; • there was an extensive, iterative process of challenge between the routes and the centre as the plans were produced during 2012, covering changes in required volumes (due to policies, traffic or enhancements) and efficiency initiatives.

Para.	Topic	ORR Statement	Network Rail's Response
			SBPT 222 and the route plan documents describe the outcome of this process, summarising the changes in the required scope of activity and the impact on costs and headcount by route and by asset. It is not practical or appropriate to share all the iterative detail of plan development in the SBP submission as this includes a large number of meetings, e-mail correspondence etc. The process was discussed in various SBP review meetings and some background material shared with the Reporters. See §8.330 for development of efficiency initiatives.
8.265	unit costs	In May 2011, we wrote to Network Rail to set out our expectations for its unit cost framework at SBP in terms of system reliability, accuracy and coverage. We stated a requirement for both maintenance and renewal related unit costs to achieve a confidence grading of A2 at the time of submission of the SBP. The company has put a substantial amount of work into improving its capture and reporting of unit costs. We have, through the independent reporter Arup, audited Network Rail's unit cost framework at SBP136. The company has not yet achieved the level of system reliability that was expected. Arup gave Network Rail's unit costs relating to renewals a confidence grading of B2. It found that the cost analysis framework (CAF), through which the majority of unit costs relating to renewals are captured, does not appear to capture all project costs for certain asset categories through the GRIP stages. In addition the company has not demonstrated that its maintenance unit costs were at confidence A2 at the time of submission of the SBP. This has implications for the robustness of Network Rail's policy development, planning, benchmarking and its ability to demonstrate realisation of efficiencies.	As has been recognised by both ORR and the independent reporter Arup, Network Rail has been continuously improving the cost analysis framework (CAF). This has been achieved by: • iterative improvements to the tools currently in use; • developing a new IT system to accommodate not only cost capture but also unit cost modelling (UCM); • putting work in place to redefine the cost structure to improve coverage; • improvements to the process through increasing the amount of automatic controls within the templates; • adding quality control measures by means of UCM reporting and internal audits. All of these points should ensure the achievement of a confidence grading of A2 in the short to medium term. With respect to CAF having not captured all of the project costs, it is necessary to note that costs captured will be representative of the way each specific project was set up. This means that if, for example, there were no development costs (where GRIP stages 1-3/4 do not exist, such as for emergency repairs or where no optioneering stages are needed), then this will be an exclusion in the unit cost that is generated. We will seek to develop an effective and common strategy with ORR that allows expectations to be met both in the confidence grading (system reliability) and the way the data is processed, analysed and modelled. Also, see §8.269
8.267	Unit costs	For all asset types Network Rail's plans are based on a mixture of unitised costs, non-unitised costs and project cost estimates. Unitised costs are used to develop plans covering 44% of maintenance and renewal expenditure. For maintenance, none of the plans is based on unitised costs. Of the renewals expenditure plans roughly 61% is based on unitised costs, 30% is based on non-unitised costs and 9% is based on project cost estimates. Generally, more certainty can be attributed to those areas of expenditure where Network Rail has forecast expenditure on the basis of required volumes and costs, or on the basis	The numbers quoted for renewals expenditure are incorrect. 64 per cent of our expenditure is based on unitised cost, 23 per cent on non-unitised cost and 12 per cent based on project estimates. The percentage of unitised spend covering maintenance and renewals is 47 per cent. Cost build up for any element is based on the most appropriate method for doing so, which is not always unit cost. For certain items of expenditure

Para.	Topic	ORR Statement	Network Rail's Response
		of well-developed project cost estimates. There is generally less certainty where forecast expenditure is based on historic costs rolled forward.	where activity over CP5 is going to be identical to that over CP4 (e.g. planned preventative maintenance within buildings), rolling historic cost forward is the most appropriate method of estimation. For other items where a large unique project is planned, a specific project estimate will be more accurate than attempting to establish a unit cost which will not take into account specific circumstances associated with the project.
8.268	unit costs	Network Rail has not directly used its collected maintenance unit costs in its planning for CP5. Its maintenance plans have been developed on the basis of historical levels of resource expenditure and not through the quantification of types of work and their cost of delivery. It carried out some central modelling of volumes and associated costs for the IIP, but there has not been any clear demonstration that this has been used to develop or evaluate the costs presented in the SBP. The limited use of historical maintenance unit costs in the development and validation of Network Rail's plans is disappointing and, because plans are not based on volumes and types of work activity, the line of sight from optimised policy to planned expenditure is not clear.	See also §8.226 above. While we accept that the clarity of the line of sight was limited by the lack of maintenance activity volumes in the SBP, this paragraph is an inaccurate summary of the SBP development process: we have used maintenance unit costs in the top down modelling that has informed the development of all the route plans; and maintenance plans are based on historic levels of resource AND the assessment of the required volumes of activity driven by asset policies, traffic growth, enhancements and efficiency initiatives. They are not simply a roll forward of existing resource levels. It is not possible to complete a robust plan solely on the basis of unit costs times volumes as not all activity is covered by the unit cost framework. In addition, our unit costs are an output of the costs of work done and not all directly applicable to developing a forward plan because: some are defined as cost per asset maintained, not as cost per activity and would not address policy-driven changes in the future work mix; and unit costs include allocation of indirect costs and may vary when the volume of activity changes. Our actual costs are driven by the overall level of resources required and therefore changes in the levels of activity need to be translated into changes in the resources required in order to produce a robust budget.
8.269	unit costs	We are concerned that the systems currently being used for the capture of unit costs are not currently capturing them at an appropriate level, using a cost breakdown structure that reflects the requirements of the business planning process.	As part of the work on the Delivery Plan, we have been developing our thinking across each of the assets on cost and volume reporting. This has involved specifying the level at which we believe information is required in order to manage each asset effectively and developing our processes to ensure that this level of reporting can be achieved for the start of CP5. Details of this will be shared with ORR as part of the Delivery Plan process.
8.270	unit costs	Arup has identified some key concerns with the unit costs and non-unitised projections used. Where expenditure is based on rolling forward non-unitised costs there is high potential for over-forecasting of expenditure. The process used for challenge of plans has focused effort on justifying expenditure which is greater than run-rate, and has not placed enough emphasis on justifying a continuation of historical levels of expenditure. For unitised costs based on historical spend there is potential for costs to vary due to the underlying mix of work types, for example where historical volumes of a work type are considerably	We agree that the use of historical costs for planning purposes has the risk of cost variation due to the underlying mix of worktypes. For track, we have provided evidence to Arup as part of the review process to demonstrate that work mix variations between base year and CP5 do not materially affect the cost of Track unit rates. For other assets where cost has been based on historical precedent (notably civils unitised cost and

Para.	Topic	ORR Statement	Network Rail's Response
		different to those projected. Network Rail has not provided any evidence of analysis to assess the effect of these issues. For all unit costs there is concern that the level of risk, contingency and management overhead costs have not been given adequate oversight at the programme or portfolio level. This has high potential to lead to an overestimate of risk and contingency. Findings by asset category are presented below.	some aspects of non unitised cost across all assets), our forecast cost is based on the best information we currently have available. There is no inherent bias within this towards overstating cost, variation in historic levels of expenditure can also lead to understatement. For buildings please see comments in buildings section of main body of response.
8.284	Climate change and resilience	Whilst it is clear that Network Rail has developed its understanding of the impact of climate change on some elements of its infrastructure it is imperative that this understanding is developed further for all assets and, in particular, for earthworks and drainage. We therefore require Network Rail to update its Climate and Weather Resilience document to include a strategic review of the key nodes in its network. The updated document must demonstrate how Network Rail has assessed the risk associated with climate change at those key nodes and how it has assessed the need for measures to improve their resilience. For example, it should consider whether it is economic to provide flood protection at critical locations and, if not, what measures should be taken to ensure that the railway is recovered back into operational use as soon as reasonably practical in the event of flooding.	As requested we have produced an update to our Climate Change and Weather Resilience document, please refer to the supporting documentation. This follows discussion with ORR to clarify requirements. This document: • provides clarity on what was embedded in the SBP through our asset policies and practices; • provides examples of relevant projects; • sets out our approach to the 'strategic review of key nodes' for the Delivery Plan.
8.285	Climate change and resilience	The CP5 asset policies generally contain improved consideration of climate change. However we have not seen evidence that these elements have been embedded in Network Rail's standards and specifications. Specific consideration needs to be given to: (a) specification of new components / equipment / systems to provide robust performance for anticipated climate scenarios over the design life. For example, Network Rail might consider including projected climatic ranges in the specification of new systems such as overhead line, track and structures. (b) evaluation of existing systems to identify and justify interventions to improve resilience to projected climate change. For example, Network Rail might consider increasing tension in overhead line systems to reduce the likelihood of dewirement due to high wind speeds, or improvements to sea defences to mitigate changes in tidal reach. (c) review and amendment of existing operating and maintenance practices to improve mitigation of the impact of climate change. For example, Network Rail might review its maintenance practices to improve management of climate driven failure modes or alter its stressing ranges for running rails.	See §8.284 above.
8.289	ORR study on asset management	The independent reporter, AMCL, has conducted an assessment of Network Rail's asset management capability as described earlier in the chapter. It has considered emerging evidence in comparable sectors to identify the efficiencies which might be realised in CP5 through improved asset management. The reporter estimates that Network Rail could identify 15 to 20% maintenance savings and 10 to 15% renewals savings from more risk-based renewal and maintenance interventions alone. It has also identified many opportunities to improve the planning and delivery of work which all have the potential to reduce the costs of engineering works over the lifetime of the assets.	The 2011 AMEM assessment together with other benchmarking work have been used to identify areas where Network Rail is at 'Best Practice': • Asset Strategy & Planning; • Whole Life Decision Making; • Asset Creation (management & delivery of major projects); • Maintenance Delivery; • Weather & Climate Change. This has led to us championing the development of UIC guidelines for asset management, a railway interpretation of PAS 55.
8.290	ORR study on asset management	We have separately commissioned a study by Civity to consider the scope of savings which might be available from better asset management. Civity's report draws on a range of evidence concerning Network Rail's asset management and supports many of the findings from the AMEM review. The report concludes that the range of potential savings is wide but is in line with the findings of the RVfM study.	We agree with Civity that further improvements in the Asset Management area can and should be made in the next Control Period. Nevertheless, we have been addressing the proposed areas of improvements for some time, as demonstrated in our asset policies, and our CP5 plans reflect these initiatives.

Para.	Topic	ORR Statement	Network Rail's Response
			In terms of Civity's proposed efficiency ranges and the proposed annual improvement of the best performing countries, no quantitative evidential base is presented and we believe this significantly undermines the validity of their conclusions.
8.291	ORR study on possession management	We commissioned a study to benchmark the efficiencies which might be available during CP5 from the improved management of possessions. The study carried out benchmarking using six international comparators, including ones from North American, Asia and Australasia.	As per our position detailed in the SBP, we find the review of Possession Management done on behalf of ORR to be of limited value for assessing efficiency potential due to two reasons: the choice of comparators selected by the consultants and the lack of quantitative evidence regarding quoted efficiency ranges. While we recognize there is likely to be room for improvement when it comes to possession management, this report clearly proves the fact that carrying out quantitative comparison against other Infrastructure Managers is not straight forward, not least because of the very different license requirements under which Infrastructure Managers operate.
8.294	ORR study on supply chain management	Civity reviewed Network Rail's supply chain management against 'world class' practice and identified some significant gaps in capability. It found key areas for improved efficiency including: better workbank planning with improved smoothing and longer term visibility to give its supply chain greater opportunity to optimise its resource management; application of a more collaborative approach to supplier engagement; further standardisation and modularisation of assets; adoption of industrial processes to deliver work more efficiently; improved access arrangements and higher productivity; a leaner but higher skilled procurement function; further development of the cost database and unit cost modelling; and further benchmarking against international peers to identify efficiency opportunities.	The key findings of this study draw upon improvements already achieved in the area, including the enhanced relationship we have developed with our suppliers which clearly demonstrates our achievements accomplished in the past two Control Periods. Additionally, this study relies heavily on the Value for Money study, especially when it comes to determining the savings potential for the next Control Period. The ranges lack practical explanations with no specific demonstration of savings.
8.296	ORR study on project and programme management	We commissioned Halcrow to review Network Rail's project and programme management capability and the efficiencies which might be available from improvement.	Many of the issues identified and discussed in this review have already been incorporated into our plans for CP5 or progressed as part of business as usual activities. Examples include improving the consistency of cost categorisation, and the development of more robust unit costs. The savings quoted by the review are relatively simplistic re-workings of the numbers produced by the McNulty Rail Value Study. The authors of this review (Halcrow) point out that they had extremely limited visibility of how the original figures were derived and we think this places great uncertainty on the conclusions of this review.
8.299	ORR study on innovation	We commissioned Balfour Beatty RailKonsult to conduct a study into the efficiencies available to Network Rail from best practice innovation and the introduction of technologies which are new to the railway in Great Britain. The study separately considered: innovation process best practice; a scan of innovations applicable to rail; an assessment of the potential value of innovation during CP5. It recognised that much work has been undertaken in the last two years to improve the innovation process. Through its benchmarking RailKonsult identified significant opportunities for the rail industry to improve its innovation practice, including:	The majority of innovations referred to are already in use or are being assessed for use on the GB rail network and have been factored into the CP5 plan. For example Ground Penetrating Radar is in use and is expected to cover 95% of the network by the end of CP4, timber bearers already have a number of life extension methods in place and, as noted by RailKonsult, recycling and cascade of components is already in action. Those under assessment include plastic sleepers, under-sleeper pads,

Para.	Topic	ORR Statement	Network Rail's Response
		setting clearer objectives; developing a long-term technology plan; simplifying industry interfaces; improving understanding of the link between research and development and return on investment; developing dedicated specialisms and centres of excellence; and reducing 'fear of failure' culture.	non-intrusive crossovers, specialist gantries and staff protection systems.
8.307	Maintenance & Renewal efficiency	Network Rail's programme of benchmarking work has been more extensive than it has ever carried out before. It includes internal and external benchmarking, international (including outside Europe) benchmarking, and, in some cases, benchmarking against other industries. The company has devoted a large resource to the programme and it has produced useful results. We consider that the benchmarking carried out represents a good start, and the efficiency opportunities identified are useful benchmarks. In some cases the data produced are less comprehensive than would be ideal. Network Rail has had difficulty in finding a suitable number of comparators that are willing to fully engage and provide quantified data within the timeframes of its PR13 programme. It has focused on understanding 'better practice' rather than understanding the quantum of efficiency that could be realised in CP5.	We welcome the recognition of the advances we have made in benchmarking and ARUP's positive assessment of the work we have undertaken. However, as stated in our response to ARUP's report on mandate A015/35, our experience is that benchmarking is a complex and long term activity. Quantitative benchmarking involves the exchange of sensitive information and therefore significant confidence to have been developed between the parties involved. This is only possible once we have built up mature bi-lateral relationships and established value in the relationship through the mutual exchange of best practice.
8.317	Efficiency overlays	The efficiency overlays that we have applied are the result of weighting our bottom-up developed efficiencies and Network Rail's efficiencies. The weighting we have applied is based on our view of the robustness of Network Rail's benchmarking and efficiency work, and for renewals it varies by asset category. This is informed by the independent reporter's review of the company's benchmarking and efficiency evidence.	We strongly endorse ORR's decision to base its assessment of efficiency potential on a bottom-up approach for renewals and maintenance. This is consistent with the way we have built our CP5 efficiency plans, and we welcome this move away from theoretical top-down methods. Placing the emphasis on understanding the practicalities and specific opportunities within each asset is a positive development, and one that increases transparency and better assessments. Whilst welcoming the broad approach adopted by ORR, we are also very concerned with the application of top-down overlays to these bottom-up assessments. This is a fundamental issue and one where ORR risks seriously compromising its otherwise positive approach. There are notable instances in the Draft Determination where top-down overlays are either applied (in the case of inflation and occupational health management) or suggested that they could yet be applied in the Final Determination (in the case of frontier shift). In all of these cases, by having taken a bottom-up approach to assessing efficiency these effects have already been accounted for – both by ourselves in our SBP and by ORR in the Draft Determination. Therefore, we disagree in the strongest possible terms with the suggestion in §4.12-4.14 that it is appropriate to combine top-down and bottom-up techniques in this manner. We are concerned by the assertion in §4.46 that frontier shift could yet be applied to renewals or maintenance. The bottom-up approaches adopted by both ourselves and ORR draw upon a wide range of sources to assess the value of the total sum of potential efficiency that could be achieved in CP5. Both approaches consider the specifics of the asset in question and also the context of the company and industry as a whole. This evidence includes best practice from other railways and industries, realistic pace of

Para.	Topic	ORR Statement	Network Rail's Response
			change achievable, current operating conditions and market/industry trends. The bottom-up assessments by both ORR and ourselves determine the limit of how the railway - in the context of the industry and wider economy - can change over the course of CP5. By definition, frontier shift has already been accounted for in these assessments of renewals and maintenance. The very concept of assessing frontier shift is based upon often incremental changes in technology and business processes, many of the specifics of which are already detailed within the initiatives we have planned for CP5. It takes a significant lead time for most novel technologies and techniques to be developed to the point where they can be implemented, thus there will be very few instances of solutions deployable in CP5 that are as yet completely unknown and would sit outside the bottom-up assessments made. In any case, our CP5 plans already include a substantial amount of stretch - most notably in signalling, telecoms and maintenance – where any unidentified efficiency would sit. The overlays that have been applied for inflation and occupational health management are not accurate – see §4.31 and §4.55 for our positions in this respect. Further, it is not valid in principle to apply them to maintenance and renewals, both of which have been thoroughly assessed by both ourselves and ORR in a bottom-up fashion as to the possible pace of change. Additionally, in the case of renewals expenditure, both of these issues sit largely outside our control. For the most part they are within the remit of the contracting base that we rely upon to carry out the works. Any advances in these areas will be already accounted for in the rates envisaged for CP5. See also §4.25. In summary, we welcome ORR's bottom-up approach but recognise that it cannot be combined with top-down overlays or assessments as this double-counts elements of the efficiency potential.
8.318	Maintenance	We conclude that maintenance efficiencies of 16.5% and that renewals efficiencies of 20.1% are available by the final year of CP5.	Please refer to *The proposed efficiency for the management of inflation is unprecedented and unrealistic* in the main body of the response.
8.325	Maintenance assessment	We consider that the links between Network Rail's proposed approach to maintenance, its submitted volumes and its planned maintenance expenditure are weak. Network Rail's submitted plans are resource based. The templates used in the financial modelling system to collate the routes' costs did not support a volumes based approach. As a result Network Rail has been unable to provide assurance that its maintenance costs represent the costs of the actual volume of maintenance work required in CP5.	See §8.268.

Para.	Topic	ORR Statement	Network Rail's Response
8.330	Maintenance efficiency	The independent reporter, Arup, has audited the benchmarking and efficiency analysis carried out for maintenance activities. In summary, it considers that the approach taken to external benchmarking and the evidence presented has some limitations, and that the approach to internal benchmarking and evidence presented is very poor. Arup found that central efficiency initiatives were not disaggregated by route and there was limited evidence of routes challenging central efficiency proposals. Due to the issues identified by Arup we have used our view of available maintenance efficiencies in developing our assessed efficient expenditure.	**Internal benchmarking** Internal benchmarking is currently used to inform our annual maintenance budgeting process within the business and is therefore fundamental to our CP5 pre-efficient maintenance expenditure. Because internal benchmarking is already used to set challenging route budgets, any efficiencies identified through internal benchmarking are already embedded in our CP5 pre-efficient baseline. We have therefore not put forward additional specific CP5 efficiency initiatives due to internal benchmarking. Going forwards, some of the maintenance efficiency stretch committed to in the SBP may be achieved through ongoing internal benchmarking work. **Route engagement and efficiency initiative development** The efficiency initiatives submitted in our SBP were arrived at via a comprehensive and iterative process between the route and central teams: • Using the routes' latest forecast position for CP4 exit, a CP5 baseline number was determined. • This was compared with the preliminary route submissions for the SBP in September 2012. All efficiencies and allowable scope changes such as Western Electrification were taken into consideration. • Central modelling for both operations and maintenance provided an estimation of how much Network Operations should cost over the course of CP5. This permitted the calculation of required savings per route for Network Operations as a whole. • Where routes had failed to meet this requirement, they were challenged to bring their saving to a comparable level through efficiencies specific to their own route. Routes were able to challenge this position, and discussions between routes and central experts resulted in final agreed targets for each route. • An intensive series of meetings through September focused on each route gaining a detailed understanding of the national efficiency initiatives - and their applicability to that route - together with the highlighting of local efficiency programmes. Route engagement continues as we further develop the CP5 national efficiency work streams, typically involving the allocation of route champions and subject matter experts to work closely with the central teams during the design stages of the work streams. Additionally, we are maturing in our approach to the implementation of improvement projects through business change and campaign embedding programmes.

Para.	Topic	ORR Statement	Network Rail's Response
			See also §8.268.
8.331	Maintenance	We have conducted our own analysis of the maintenance efficiencies that might be available during CP5. The key difference between our assessed maintenance efficiency and Network Rail's submission is that we assume a different profile, with lower efficiencies to be delivered in the earlier years of CP5 and higher efficiencies to be delivered in the later years. This assumption reflects our concerns over the delivery of efficiencies in CP4 when Network Rail reduced staffing levels before fully embedding more efficient ways of working. Our findings are given by asset below.	Please refer to *The proposed efficiency for the management of inflation is unprecedented and unrealistic* in the main body of the response.
8.358	Fencing renewals	Modelling is not as refined as for the track asset but it uses reasonably accurate actual data from fencing and vegetation surveys. The off-track model for fencing was found to have inconsistencies with the asset policy which leads to uncertainty over its outputs. Unit rates used were found to be rudimentary but consistent with the off-track policy. No computational errors were identified.	The claimed inconsistency between the policy and modelling relates to the impact of refurbishment and is a misunderstanding of our modelling assumptions. In their modelling report Arup suggest that refurbishment results in a life extension that is not captured in the model, with the implication that renewals in CP5 are overstated (they also suggest that CP6-11 activity is understated). This is incorrect. The modelled refurbishment activity (along with other maintenance) is necessary to achieve the assumed asset life in the model and does not extend it. The impact of refurbishment is reflected in the modelled asset degradation assumptions and is not incremental to it.
8.359	Fencing renewals	Our view, supported by the independent reporter, is that the overall costs which are included in the plan are above the levels which are necessary to deliver the policy requirements. For these reasons we have reduced Network Rail's pre-efficient plans for management of boundaries by 25%.	Arup actually say that *"there is some uncertainty whether the overall costs included in the SBP may be above the levels which are necessary to deliver the policy requirements*". The main justification for this appears to be the issue referred to above in §8.358 which is a misunderstanding of the policy. We recognise that there is more uncertainty around our forecasts for off track than for other assets, reflecting the relative immaturity of the development of the policy and associated modelling. However, the proposed reduction in activity volumes of 25 per cent is not soundly based and would make it impossible to meet our policy objectives to address asset condition. It would also reduce the risk reduction that would be delivered by the SBP level of activity.
8.362	Signalling unit costs	The independent reporter's audit of signalling unit costs has found some limitations in the approach adopted including the adjustment of new framework rates to reflect historical levels of cost performance. As with all asset types Network Rail has not provided sufficient evidence to demonstrate strategic oversight in the estimation of risk allowances. It has estimated risk at a unit cost level rather than a programme level which has high potential to overestimate risk allowances. The reporter has also found that uplifts have been made to unit costs based on the risk and management costs seen in CP4. The new signalling contracts have transferred some risk to the supply chain and it is not clear that this has been reflected in the CP5 unit costs. For these reasons we have applied a 3% reduction to Network Rail's pre-efficient costs.	See *The expectations on track and signaling unit costs and efficiencies are unrealistic* in the main body of the response.
8.372	Signalling efficiency	Our assessment of additional efficiency has found some significant opportunities remain from further adoption of modular signalling, plug-and-play technology, improved asset management systems and from adopting best practice supply chain management. The analysis results in a higher level of efficiency than proposed by Network Rail.	We disagree that significant opportunities remain for plug-and-play technology. Our CP5 plans already include extensive implementation of plug-and-play technology in order to deliver our proposed efficiency savings. We do not foresee it being possible to increase its use beyond

Para.	Topic	ORR Statement	Network Rail's Response
			what we have already planned for in CP5. Similarly, modular signalling has already been factored in to the SBP. Any increase in its use would require additional development activity which is not accounted for in our plans, which we would need to fund accordingly. Please see also *The expectations on track and signaling unit costs and efficiencies are unrealistic* in the main body of the response.
8.378	Treatment of ERTMS train fitment costs	In its SBP, Network Rail treated costs associated with fitting ERTMS equipment on trains as renewal expenditure. Our draft determination uses the same categorisation (i.e. these costs are included in Table 8.32 and Figure 8.11). However, because the costs of ERTMS train fitment are new they are uncertain and levels of risk are high. For final determination we therefore propose to treat ERTMS train fitment costs as an enhancement ring-fenced fund as discussed in chapter 9.	Noted.
8.380	LX unit costs	Unit costs for level crossings are produced in a similar manner to conventional signalling equipment. However, our review suggests that they include high levels of additional overlays which have not been fully justified and that they are high compared to other control periods. We have therefore applied a 7.5% reduction to level crossings pre-efficient costs.	See *The expectations on track and signaling unit costs and efficiencies are unrealistic* in the main body of the response.
8.387	Asset data	Civils structures asset data are of poor quality. Whilst Network Rail now has reasonable data governance processes in place there is very significant inaccuracy in the records held. This leads to high uncertainty in the planned works for CP5. The independent reporter graded civils asset data quality B5.	This paragraph omits some important background on the data quality scores. The data quality score of B5 relates to Arup's assessment of data for licence compliance purposes and not for CP5 SBP planning purposes (as implied by the text), for which Arup assessed B4. The B5 rating reflects assessment of current compliance with an aspirational specification for future data capture – the score of 5 effectively saying that we do not hold complete datasets for attributes that we have just started collecting.
8.390	Civils unit costs	Unit costs are used to develop just over half of the CP5 planned expenditure for overbridges and underbridges, 87% of earthworks expenditure and less than half of the remaining expenditure. The proportion of civils planned expenditure based on non-unitised costs is relatively high and these have a greater level of uncertainty.	See *The investment framework should support a broad range of opportunities including efficiency, safety and R&D* in the main body of the response.
8.391	Civils unit costs	The independent reporter has audited Network Rail's development of its civils unit costs and found a range of issues which introduce uncertainty or bias: there is significant uncertainty in the method of cost estimation for overbridges and underbridges and the level of preliminary costs within these items is disproportionately high for civil engineering works of this nature; there is an error in the application of further overlays for preliminary works and management costs which is likely to lead to an overestimation of costs of approximately 10 to 20%; there is potential for the overestimation of risk and contingency in the unit costs due to overlays being applied at a disaggregated level; there is inconsistency in the inflation indices used to uplift historical costs for different civils asset categories; further evidence is required that the historical mix of work is representative of the mix of work in CP5 as this affects unit costs; and there is very high uncertainty in relation to minor works cost projections.	See *The investment framework should support a broad range of opportunities including efficiency, safety and R&D* in the main body of the response.

Para.	Topic	ORR Statement	Network Rail's Response
8.399	Civils efficiency	Network Rail has forecast civil renewals efficiency of 13.8% during CP5. Our analysis finds potential for greater efficiency of 19% from adopting best practice asset management for these assets. For example, there is potential for efficiency from better packaging of civils renewals works, improved supply chain management and improved data management, availability and analysis. There will also be efficiencies available due to the high volumes of work required over the next two control periods. Our audit of Network Rail's benchmarking and efficiency work has found that there are some significant limitations to the approach adopted and evidence base presented. Whilst the company's external benchmarking was considered relatively good, the audit found significant limitations in plans at operating route level and a lack of internal challenge applied. For the first two years of the control period our efficiency analysis finds very similar levels of efficiency to Network Rail's plans. We have accepted Network Rail's efficiencies for these two years. For the remaining three years, due to the weaknesses identified in Network Rail's approach we have applied 25% weighting to its analysis and 75% to ours.	We disagree with the assessment that a higher CP5 exit efficiency can be achieved for the civils portfolio. However, we welcome the introduction of the civils adjustment mechanism to help manage the uncertainty surrounding this asset base, and believe that a clearer understanding will evolve during the initial stages of CP5.
8.406	Civils adjustment mechanism	In total we have reduced Network Rail's planned renewals expenditure on civil engineering works by £281m but we are funding a considerable increase in civils renewals expenditure (£418m more than is planned for CP4, or £565m more after adjusting for CEFA). Recognising that there is high uncertainty around the exact requirement, we propose that civils expenditure is treated differently in the determination, through a "civils adjustment mechanism".	We support the principle of the civils adjustment mechanism and agree that it is an appropriate way of recognising the level of uncertainty around the appropriate level of activity and expenditure. We acknowledge that the derivation of our civils plans in the SBP was not presented as clearly as it could have been, and that a significant amount of clarification material was submitted after the main SBP submission. This reflects the much greater scale of the challenge compared to other assets in developing asset policies and associated whole life cost modelling. The policy work was completed relatively late in the process and the time available for our routes to develop their workbanks in line with the policy was limited. As is acknowledged in the Draft Determination, we have made a great deal of progress in addressing the limitations in our civils asset management processes but we recognise that there is more to do. We have some comments on the detail of the proposed adjustment mechanism which are set out below.
8.407	Civils adjustment mechanism	The civils adjustment mechanism will work as follows. In the first two years of the control period Network Rail is expected to deliver the civils renewal volumes proposed in the SBP. Any under-delivery of volumes will have to be caught up. Volumes should not go above the agreed levels, but if they do the normal RAB roll forward policy will apply. Any underspend or overspend for unit costs reasons will be subject to the RAB roll forward policy. (In simple terms, the RAB roll forward policy allows Network Rail to keep 25% of efficient underspend but requires it to bear 25% of overspend.)	We do not believe that the first two years should be treated on a fixed volume basis using the SBP volumes. In the light of ORR's comments about the level of uncertainty in both activity volumes and unit costs it seems odd to conclude that the volumes and unit rates as adjusted by ORR in years 1 and 2 are robust enough for this process. The SBP route plans were a combination of bottom-up workbanks and top down modelling output, in years 1 and 2 as well as later years. Since the SBP was submitted there has been significant further development of the route workbanks and this is continuing for the production of the CP5 delivery plan. We have also undertaken further analysis of unit costs.

Para.	Topic	ORR Statement	Network Rail's Response
			We believe our delivery plan forecasts of expenditure and activity should be the basis of monitoring in years 1 and 2, not the SBP. We recognise that any material changes in the overall level of activity compared to the SBP would need to be justified. However, it is likely that there will be changes in the overall work mix and the balance between routes.
8.408	Civils adjustment mechanism	Network Rail must submit a plan in March 2015 for the work it proposes on renewal of civils assets during years 3, 4 & 5 of CP5. It is important that this plan is of a high quality such that we can form a judgement on the volumes and efficient costs of the work for which Network Rail will be funded. We will issue a notice by 31 March 2014 requiring Network Rail to submit a plan no later than 31 March 2015. We will expect the plan to demonstrate that Network Rail has in place a bottom-up workbank, created by applying its asset policies to the civils asset portfolio, in accordance with condition 1.19 of its Network Licence. The workbank will be specific as to each asset on which work is proposed, its condition (at that time), the scope and cost of the work proposed, and its condition when the work is complete.	We support the overall approach to civils and will develop a more robust submission for years 3 to 5 as requested.
8.415	Drainage assessment	Network Rail's costs associated with drainage are included within its earthworks and track forecasts. Effective drainage management should result in savings to required work for both track and earthworks. By including drainage costs with these elements Network Rail is incentivised to deliver it effectively which should result in direct savings to track and earthworks activities. However, because of outstanding data deficiency and high uncertainty in the CP5 targets, combined with lack of route information provided for review, we consider the volumes and costs to be highly uncertain. We expect Network Rail to improve this substantially in its delivery plan.	Noted. We will address this in our Delivery plan.
8.417	Buildings asset data	The independent reporter has audited the quality of asset data relating to franchised stations and managed stations. Some minor issues with data governance were identified but it was, on the whole, found to be in line with good practice. The dataset was found to be complete and accurate. Buildings asset data and its governance have recently improved through implementation of an enhanced asset management system which allows better recording of all works carried out on the assets, improved control of data quality and better access to information. Buildings data quality is graded B1.	The assessment of data quality as B1 is drawn from the Arup asset data quality report which qualifies the score as not being based on a robust sample size. The most recent assessment of the data underpinning the SSM condition score (covering much of the same dataset) is B2, as noted in chapter 3. This provides a more reliable indicator of the baseline position on data quality.
8.419	Buildings assessment	The audit of buildings unit costs has found their coverage to be relatively low and there is scope for this to be increased to improve the accuracy of plans. A significant proportion (approximately 40%) of Network Rail's buildings plans are based on less robust non-unitised costs. The unitised costs developed only cover building structures and fabric and omit unit costs for mechanical and electrical systems. The audit has found that the quality of evidence to support adjustments which uplift national unit costs is low. The unit costs used include contingencies of 5% which may be high as Network Rail has not demonstrated that it manages risk appropriately at a programme level. We have found many instances of unit costs which do not appear credible and/or for which units are inconsistently applied. For these reasons we find very significant uncertainty in both Network Rail's buildings pre-efficient unit costs and non-unitised costs and reflect this in our overall adjustment to buildings plans discussed below.	See main body of response, *The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified*.
8.423	Buildings assessment	For all categories of expenditure other than managed stations and depot plant, the high level of pre-efficient costs appears to be driven by policy which is not demonstrably optimised and by highly uncertain unit costs. The independent reporter, Arup, has identified that the degradation profiles used by Network Rail in its whole life cost modelling and in its modelling of policy to produce volumes are pessimistic and therefore tend to overstate the intervention requirements, volumes and expenditure required in the long-term. We have reduced Network Rail's pre-efficient buildings renewals plans by £235m to reflect our	See main body of response, *The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified*.

Para.	Topic	ORR Statement	Network Rail's Response
		findings.	
8.425	Buildings renewals – Anglia	There are some anomalies in the route plans between the average level of expenditure forecast per station. The plans for the Anglia route do not demonstrate clearly how the transfer of maintenance and renewal responsibilities to the Greater Anglia franchise has been allowed for. We have not made additional adjustment for this since it is covered by the overarching adjustment applied.	During the SBP review process we explained that there is no activity or spend in the Anglia Route Plan for Greater Anglia stations as the responsibility has transferred to the TOC. This is stated on page 74 of the Anglia Route Plan, was minuted in the buildings policy review meeting (ID45), confirmed in the buildings question log (BLD 1017) and again in e-mail correspondence on 12th March. The SBP Renewal Expenditure Summary document (SBPT 223) also highlights this as a source of variance against the top down modelling. We also shared the detail of the Anglia workbank during the Anglia route buildings meeting with ORR and Arup. As there are likely to be other changes of responsibility for stations (in both directions) as franchises are re-let it is important that there is an adjustment process in place.
8.430	Electrical power assessment	Where unit costs have been used in building plans these have been developed using an appropriate methodology and are aligned with good practice. The reporter has traced the rates through to the SBP submission. Network Rail has not provided a full justification of the overlays applied to the unit costs and, as with other assets, has not demonstrated a programme level overview of risk estimation. For these reasons we have applied a 2% reduction to the pre-efficient plans for electrical power and fixed plant.	See main body of response, *The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified*.
8.442	Telecoms unit costs	The independent reporter's audit of telecoms unit costs found that a high proportion (52%) of telecoms plans was based on non-unitised costs. The projection of these costs and their overlays (e.g. 'abnormals') has not been supported by sufficient evidence and this results in a higher uncertainty relating to telecoms pre-efficient expenditure forecasts. Network Rail's unit costs are built up using an appropriate methodology but treatment of risk and contingency is not clear and, as with other asset categories, no programme level view of risk estimation has been demonstrated. We have applied a 2% reduction to account for duplication and overestimation of risk overlays.	See main body of response, *The assumptions on other renewals are also unrealistic, and the consequences for the framework for buildings needs to be clarified*.
8.449	Telecoms	We have made adjustments to the pre-efficient plans for telecoms renewals where Network Rail has not provided sufficient information to justify them. We have reduced expenditure by £33m in the first year of CP5 where plans submitted are not in line with the plans submitted by NRT and smaller adjustments in later years.	We acknowledge the inconsistency between the core SBP documents and the supporting document on the NRT plan, which was not completely up to date. However, we made clear throughout the process that the core SBP document and associated databook formed our submission and took primacy over any supporting papers if there were any inconsistencies. We clarified this with specific reference to the telecoms figures during the SBP review process and provided an explanation of the differences between the SBP and supporting NRT plan document. The main issue is the inclusion of £28m in year 1 of CP5 for additional costs associated with migration of systems to the FTN network. These works represent additional scope beyond that assumed in FTN funding and are not slippage of activity funded in CP4. Key elements of this are: BT 'Sunset 2018' works. BT advised us in 2006/7 that they would be replacing this equipment and that we (and other customers) would have to migrate off it. This was not part of the original FTN/GSM-r scope set in

Para.	Topic	ORR Statement	Network Rail's Response
			2002 and requires c.1000 connections to be migrated by 2018. These BT services currently support signalling, electrification, concentrator lines. Reporting of trains to TRUST and other operational services. If we did nothing the operational railway would be severely affected, BT have stated they will not support the equipment and maximum impact could be a complete stop to train movement. Lewisham Data Ring: Renewal and enhancement of the transmission services supporting 14 SCADA rings controlled from Lewisham ECR. These legacy systems are 30 years old and life expired with minimal spares for maintenance. Electrification SCADA is a critical safety application in the railway which is required for the isolation and emergency shutdown of traction power. If we do nothing the operational network would be severely affected upon a systematic failure. There would be a requirement for the electrical locations to be manned with trained electrification & plant resources. Migration of critical services added to our network since the FTN/GSM-r programme start date and outwith the original scope for migration. This includes services related to signalling, key operational telephony systems and electrification SCADA services (not those provided by BT) to be transferred onto the FTN. Migration has already had a positive impact on train performance in areas successfully delivered. If we did nothing, operational services would be affected due to the age and dilapidating transmission systems. Also the maintenance organisations would be reliant on maintaining and faulting two networks.
8.457	Wheeled plant	The independent reporter's audit of wheeled plant unit costs has found that a lack of clear evidence that rates have been built up using a robust methodology. It highlights that, for larger bespoke plant items and systems costs will largely be driven by the market's response to a procurement exercise and that this leads to real difficulties in projecting costs. For road vehicles the reporter notes that Network Rail has not considered any residual value at the time of disposal. This supports our adjustment to pre-efficient expenditure on road rail vehicles as described later.	We understand that ORR have adjusted pre-efficient costs for road vehicles, not road rail vehicles. The statement that "the reporter notes that NR have not considered any residual value at the time of the disposal" does not align with the final version of Arup's Unit Cost report (page 109), which states correctly that unit costs for road vehicles were adjusted by a factor of 0.89 to allow for residual value – so this does not support any cost adjustment. See also §8.461 below. .
8.461	Wheeled plant renewals	The wheeled plant strategic planning model was found to be generally consistent with asset policy, except for the road fleet which was assumed to be replaced every four years (whereas policy states every five). There were no material unexplained issues with input data and no errors found in computation. We have made an adjustment to expenditure on road vehicles of £3m to reflect this issue.	The ICM correctly reflects our policy of replacing cars every 4 years and all other vehicles every 5 years. The policy document incorrectly stated that all vehicles would be every 5 years and has since been corrected. This was clarified during the SBP review process. In light of this and the residual value issue (see §8.457 above) ORR's

Para.	Topic	ORR Statement	Network Rail's Response
			reduction in pre-efficient spend is not appropriate.
8.471	IT and ORBIS	Network Rail has proposed an increase in IT expenditure of approximately £150m above CP4 levels. This increase is based on benchmarking against other organisations but no clear plans have been produced for how this will be spent or what it will deliver.	See §8.475 below.
8.475	IT and ORBIS	We support Network Rail's plans to improve its information management but consider that these plans need to be considered in conjunction with other IT expenditure as both relate to business change programmes and there is not a clear distinction between them. Network Rail has not presented sufficient justification for its proposed increase in IT expenditure over and above its ORBIS expenditure. We have assessed the total efficient expenditure for IT and ORBIS based on a continuation of CP4 levels of expenditure. The company has recently submitted some further evidence which we will consider in our final determination.	We have material concerns with ORR's approach to IT and ORBIS in the Draft Determination. These concerns relate to: • the treatment of ORBIS as an IT programme • the reduction in spend proposed within the IT renewals budget and • the additional efficiency assumptions that have been applied to ORBIS We believe that ORBIS and IT must be treated separately and that investment in IT is key to delivering improved business performance. Our more detailed response on these issues can be found in the main body of the response, *The proposed level of expenditure on information technology is inadequate.* ORR has proposed a reduction in our ORBIS spend of £15m. ORBIS is a critical enabler of other business outputs, principally relating to efficiency and asset management. Successful implementation is therefore vital to our ability meet our overall CP5 targets. Successful business change is brought about through the right technology backed by sustainable processes delivered to an engaged workforce having the necessary competencies. Our pre-efficient spend of £221m represents the pre-efficient cost of the balanced package of measures needed to achieve this. Our SBP efficiency assumptions for ORBIS are extremely challenging, reaching 59% by the final year of CP5 (post-efficient budget compared to pre-efficient). Any further reduction in expenditure is not possible without compromising the ability of the programme to deliver the proposed scope, and therefore we will be forced to overspend compared to the allowance made in the Draft Determination. Our post-efficient ORBIS spend of £173m represents the most efficient way of achieving the balanced package necessary to deliver the ORBIS vision.
8.476	Property Capex	Our assessment of Network Rail's plans for property renewals finds that expenditure levels before efficiency are reasonable but that a higher level of efficiency is available. We assume an efficient level of expenditure of £113m.	Our Property capex is spread across 2 areas: Workplace Management and Commercial. The Workplace Management element of the spend relates to fulfilling obligations to leaseholders. Cutting funding will lead to a less sustainable way of managing these assets. A reduction on the Commercial aspect of the spend would compromise income, as the rents we can achieve would be reduced due to a worsening in the state of repair of the

Para.	Topic	ORR Statement	Network Rail's Response
			asset. Our CP5 forecast is based on our experience from CP4.
8.477	Intelligent infrastructure	We have assessed Network Rail's proposal for expenditure of £95m on further roll-out of remote condition monitoring. The proposed further implementation appears reasonable but we have not yet seen sufficiently detailed plans. We have asked Network Rail to quantify what this expenditure will deliver and it has presented high level information. We expect Network Rail to set out detailed plans, including milestones, in its delivery plan. We will monitor delivery against this plan.	Noted. This will be addressed in our delivery plan.
8.478	Faster and safer isolations	Network Rail has proposed an investment of £230m in CP5 for taking safer and faster isolations, citing safety improvements as the main reason for the investment. £90m was proposed for improvements on the AC network and £100m for the DC network. The remaining £40m of expenditure was for further DC improvements. The investment of £190m for taking safer and faster isolations on the AC and DC network is considered appropriate but we consider that there is insufficient justification for the £40m for further DC improvements. We have applied an efficiency overlay in line with our assessment of efficiency for electrical power and fixed plant renewals. We assess efficient expenditure of £163m.	We note that the Overhead line efficiency rates have been applied to AC improvements, and Conductor rail efficiencies have been applied to DC improvements, accounting for the reduction in funding proposed in the SBP. With regards to the further £40m that has not been included in the Draft Determination, we recognise that we haven't produced a full business case for the additional £40m worth of investment on the DC network. We anticipate that further expenditure will be required during CP5, for example on expansion of work beyond routes already identified and funded. We expect full business cases will be possible for these and other items, following the comprehensive review of DC electrical safety currently underway. We would welcome the opportunity to revisit expenditure levels in this important safety area during the course of CP5.
8.479	Investments	Network Rail's proposal for £100m expenditure on a system for providing alerts to track workers is reviewed in chapter 11. We have made an allowance of £10m for the trialling of the proposed system in CP5. We have not included Network Rail's proposal for an investment of £100m for alerts for track workers in our determination because Network Rail has not made a compelling case for this investment. Instead, and recognising the importance of track worker safety, our determination includes a ring-fenced fund of £10m for the development of new technologies to alert track workers. We will agree the governance arrangements for this fund with Network Rail before April 2014.	See main body of response, *The investment framework should support a broad range of opportunities including efficiency, safety and R&D*.
8.481	Investments	Network Rail has presented plans for expenditure of £300m on research and development. We fully support an increased focus on research and development. The HLOSs included a £50m innovation fund. In addition to that fund we are developing a matched funding financial incentive as described in chapter 19 and have therefore not included funding for research and development in our assessed renewals expenditure.	See main body of response, *The investment framework should support a broad range of opportunities including efficiency, safety and R&D*.
8.484	Our conclusions – maintenance	We have made no explicit adjustment to maintenance volumes as proposed by Network Rail. The company will set out its proposed volumes consistent with delivery of its asset policies and maintenance strategy in its delivery plan. The company will need to provide an explanation where its delivery plan volumes are different to the volumes submitted following the SBP, a subset of which is shown in Table 8.1. We will monitor maintenance volumes during the period against its delivery plan. Network Rail will need to provide us with	Further detail will be provided in the Delivery Plan.

Para.	Topic	ORR Statement	Network Rail's Response
		justification for any material divergences between the actual volumes delivered in a year and those forecast in the delivery plan. We will also monitor on a forward looking basis, considering whether the volumes are likely to be delivered.	
8.487	Our conclusions – renewals	The company will set out its proposed renewals volumes consistent with delivery of its asset policies in its delivery plan. The company will need to provide an explanation where its delivery plan volumes are different to the volumes submitted in the SBP, a subset of which is shown in Tables 8.11 to 8.13. We will monitor renewal volumes during the period against its delivery plan. Network Rail will need to provide us with justification for any material divergences between the actual volumes delivered in a year and those forecast in the delivery plan. We will also monitor on a forward looking basis, considering whether the volumes are likely to be delivered.	Further detail will be provided in the Delivery Plan.

Chapter 9: Enhancements Expenditure

Para.	Topic	ORR Statement	Network Rail's Response
9.22	Outputs	We said in our outputs consultation that we intended to continue to have milestones for enhancements in Network Rail's delivery plan and to have a change control mechanism. Both these approaches worked well in CP4 and are widely supported. Setting out when it will deliver each stage of a project, and keeping this updated, is useful information for stakeholders and customers. We will use these milestones to monitor whether Network Rail is on course to deliver each project. We will categorise some of the milestones as 'outputs', which means that they will be subject to regulatory enforcement if they are missed or likely to be missed (a further explanation of outputs is set out in chapter 3).	We welcome the continued use of the Enhancements Plan and change control process.
9.23	Outputs	Although the outcomes of delivering enhancements are not specifically picked up in the National Passenger Survey they can be one of the biggest drivers of customer satisfaction in specific locations or on specific routes where benefits are delivered. Therefore, we will make sure that regulated outputs are based on the timing of the delivery of passenger and freight customer benefits, as this is what matters to customers. These will be finalised in the enhancements delivery plan, which will be published by Network Rail and agreed by us before the start of the control period. A draft will be published in December 2013 and open to wider consultation before being finalised by March 2014. In this way the delivery milestones will reflect stakeholder input, and the main issue here is likely to be ensuring a match between service level changes operators are trying to deliver and Network Rail's infrastructure changes. For example, recognising the difference between Network Rail's obligations and those of other industry partners, matching up the delivery of longer platforms to when longer trains are timetabled to be introduced.	We need to agree regulated milestones that are in control of Network Rail. This could still relate to output changes but Network Rail cannot be at risk for output change outside of its control e.g. delivery of new rolling stock.
9.24	Outputs	For projects at an early stage of development the regulated outputs in the March 2014 delivery plan will be to achieve GRIP 3. After that they will be changed to the delivery milestones, when these are further defined.	We welcome this approach.
9.32	Determining efficient costs	Network Rail's internal benchmarking of unit rates was based on data collected from CP4 projects, but coverage was low in terms of comparable work and the rates only apply to direct costs, such as construction. In addition, Network Rail did not manage to collect any good quantitative external benchmarking information. We therefore decided to extend the use of benchmarking in our own assessment, particularly to understand indirect costs, such as design or project management, and risk provisions.	We have identified projects where reduction of risk allowances is inappropriate. We also challenge the ORR's efficiency assumptions, the application of portfolio risk overlay and the removal of scope on a project by project basis. Further detail is set out in the Enhancements detailed supporting document.
9.41		Of the projects they were able to analyse both upward and downward adjustments were made to correct any omissions and ensure estimates were in the right price base. For electrification and power supply schemes the consortium benchmarked direct costs across the CP5 projects. For indirect costs they used their own benchmarking data to check whether those proposed for each project were in line with expected norms. The consortium then looked at both the individual project risk allowances and overall risk portfolio overlay. Finally they assessed Network Rail's efficiency proposals and applied it to a greater number of projects. Their adjustments are summarised in the following charts. (See figure 9.5)	We challenge ORR's use of much lower unit rates on some electrification and power supply schemes on a project by project basis. Further detail is set out in our Enhancements detailed supporting document.
9.50		Appropriate governance has to be put in place involving the TOCs and FOCs to ensure the right projects are selected and scope is sufficiently developed and ensure train operators are engaged as early as possible so that project scope is optimised for best value before the detail design and delivery stages.	TOCs and FOCs are involved in the long term planning process that leads to the production of route plans (previously RUSs), and the identification of options for making changes to the network capability.

Para.	Topic	ORR Statement	Network Rail's Response
			We are seeking to involve TOCs and FOCs in a gain-share mechanism that allows them to share in the savings that can be made by using their inputs to help us select the right projects, and the right scope for those projects. We are piloting this on Leeds projects, and are seeking to introduce across the portfolio, concentrating on the CP5 projects that are in an early stage of development.
9.52	Scotland	We think there are high levels of uncertainty in the remaining projects, for example in the phasing of the rolling programme of electrification and the proposed solution for the Edinburgh gateway station. As in England & Wales we have therefore decided to treat all projects where we set an efficient cost (the £1.1bn portfolio) differently from PR08 and review costs for these later in the control period when they are more certain.	See §9.24
9.54	Process for determining efficient costs in England & Wales and Scotland	We are therefore determining the efficient cost and outputs in two steps. The first concludes with our final determination, where we include in our assumptions an efficient level of costs and outputs based on our assessment of the information provided with the SBP. This incorporated the review done for us by the Nichols consortium. We have made adjustments to ensure the funding allocation is appropriate for the stage of project development. We made an efficiency overlay that is commensurate with a portfolio that is largely at an early stage. This has been used in calculating the revenue requirement and access charges.	We do not agree with the findings of the Nichols work. Further detail is set out in the Enhancements detailed response document.
9.55		However, we have decided that a second step is needed which will conclude at the end of year 1 of CP5, i.e. by March 2015, at which point project development will be more advanced, and therefore the cost certainty will be higher. This will mean that we can determine more 'accurate' costs to be added to the RAB. It will also mean that the baseline for the underspend/overspend framework (RAB roll forward policy) to incentivise outperformance will be strengthened.	We welcome this approach. There has been constructive discussion between Network Rail to revise and refine the proposed framework as defined in the Draft Determination. Areas of revision include a progressive approach through the control period of project cost confirmation to allow the delivery of the enhancements portfolio with minimal delay. Further discussion is requested to confirm how this process will work in detail. A key issue is how to manage the overall funding available and the potential for the efficient cost to be different to that assumed in the Final Determination.
9.56		We expect Network Rail to have reached GRIP 3 for the majority of projects by this time (March 2015), with a much greater degree of operator involvement. During the development work, as more projects reach GRIP 3 we will monitor the emerging costs at portfolio level as well as project level. We will challenge projects, particularly where costs escalate above the assumed funding in the final determination.	The framework should allow for the refinement of costs progressively through the control period, recognising the need for further development work to produce robust estimates.
9.57		Network Rail will make a submission to ORR in line with the principles of the investment framework at GRIP 3 (or agreed alternative) and we will then decide what costs should be the baseline for the underspend/overspend framework (RAB roll forward policy). The submission will demonstrate: (a) the output is consistent with the HLOS, verified by the HLOS capacity model where necessary, and the business case is value for money; (b) evidence of operator buy-in to the selected option (e.g. through any benefits sharing agreement); (c) a delivery plan change control submission to set out project milestones; (d) evidence of efficiency or stretch within the anticipated final cost; and (e) evidence that the selected option is the best whole life cost solution.	Further discussions involve a much more progressive process so that we can deliver programmes in a timely fashion with confidence about overall affordability. We do not believe we should be updating the business case where we do not own the business case e.g. the electric spine. Change control should be a progressive process as we achieve the key end GS3 milestones.
9.58		We do not expect the aggregate costs to exceed the amount we have set in the determination, but if it does then we will discuss the implications with the funders before reaching our final decision.	Ongoing discussions with ORR have identified that the overall cost of the portfolio could be less than or greater than that assumed in the Final

Para.	Topic	ORR Statement	Network Rail's Response
			Determination.
9.60		We believe there are opportunities through closer working with train operators to reduce unnecessary scope in the design stages and deliver construction work in a more cost-effective way. In December 2012 we published our decisions on route-level efficiency benefits sharing (REBS), which excluded enhancements as we concluded that these are more suitable for bespoke alliancing arrangements161. We want Network Rail and train operators to enter into commercial agreements that will reward operators if cost savings are achieved as a result of their involvement. We will consider any such payment efficient where Network Rail and train operators can demonstrate that this has happened, including how long-term value has not been compromised by short-term reward. We believe that this will help Network Rail and train operators to focus enhancements on delivering best value for money for the railway's customers. We also believe this will help Network Rail out-perform the settlement and it does not require any changes to the regulatory framework.	Work we have done on developing the ScotRail Alliance proposition, suggests that, at least in Scotland, including enhancements within the REBS process does not work. We believe that a separate bespoke risk/reward sharing mechanism is required on a project by project basis rather than on a portfolio basis, recognising that for each enhancement different operators will be involved to greater/lesser degrees.
9.64		All other enhancement projects in Scotland (except for Borders) are subject to the underspend/overspend framework (RAB roll forward policy).	As the various projects included in this are planned to conclude GRIP 3 between December 2013 and September 2014, a mechanism is required for approval of these in a timely fashion to ensure completion of the works at appropriate dates in CP5.
9.66	RAB roll forward policy	The underspend/overspend framework for enhancements will operate as in CP4. The key difference is that the PR13 determination for enhancement costs will not be the baseline for the framework. Instead it will be set at the end of 2014-15 following our second review of the portfolio costs. It will be this expenditure level that Network Rail will be incentivised to outperform. This will also be used as the base in our assessment of Network Rail's financial performance.	See §9.55
9.84	Electrification schemes	We have set an assumed level of funding for the Electric Spine programme – including MML electrification and Derby station. It is now for Network Rail and operators to urgently progress the design and development work of the whole portfolio to define the best value outputs in CP5 within the allocated expenditure, taking into account rolling stock availability, schedule risks and efficient delivery in the context of a large amount of other electrification work in CP5.	This is a complex programme and development of firm outputs, scope and cost for the Electric Spine programme is likely to extend through the control period.
9.100	Other committed schemes	As explained in chapter 5 Network Rail's support functions provide services to enhancements projects where the costs of these activities are capitalised rather than expensed in the year. Analysis of the SBP showed an additional capitalised cost of £62m in CP5 which did not directly link to its assumptions on support costs and Network Rail has not been able to adequately explain this inconsistency. As a result, we have deducted £62m from enhancement costs across Great Britain. We have divided this amount between England & Wales and Scotland based on current train kilometres and have therefore deducted £56m in England & Wales.	We disagree with the reassessment of capitalised costs, the analysis carried out for the SBP indicated that the overhead included within capex might be higher than the amount of opex capitalised to projects. During CP4, there have been occasions where Network Rail has had insufficient internal staff resource to manage projects and so has brought in temporary staff either directly or by way of a service agreement in order to cover templated posts. Whilst we would normally expect such costs to be charged to opex first and then be capitalised, on several occasions these costs have been charged direct to capex. By way of example, the Key Output 2 team for the Thameslink Programme initially included a significant number of individuals supplied by contractors and charged direct to capex. In such a case there was therefore a mismatch between the project overhead and the (lower) amount of opex capitalised. This treatment is acceptable from a control and accounting perspective. The analysis carried out for the SBP similarly shows that management of

Para.	Topic	ORR Statement	Network Rail's Response
			projects will require more resource than the Network Rail staffing included in the SBP; the use of contracted in staff resource makes sense in terms of efficiency and effectiveness and Network Rail should not be required to maintain enough staff to cover all activities. Accordingly, it is reasonable for the amount of project overhead in capex to be higher than the identified resource cost within opex.
9.101	Occupational Health	As with other areas of expenditure we have applied an overlay for cost savings that will come about by better management of inflation and better management of occupational health. This is described more fully in chapter 4.	See §4.56
9.102		Explained more fully in chapter 18 there are some projects not included in the SBP that will generate an income for Network Rail, which we have considered in Network Rail's other single till income. Therefore, we need to include an assumed cost of these projects, £416m across Great Britain. As with the capitalised cost we have divided the total between England & Wales and Scotland based on current train kilometres, resulting in an additional £375m in England & Wales.	See the main body of our response, section 'The projections of property income are unrealistic'.
9.103		As a result of our recalibration of Schedules 4 and 8, explained in chapter 20, Network Rail requested that we make an allowance of an extra £169m in its enhancements costs. We did not have time to scrutinise this before the draft determination but will do so for the final determination. We have included the extra amount in our revenue requirement calculation.	The impact of the revised Schedule 4 regime is being assessed to inform the Final Determination.
9.109	ERTMS	The design and fitment work will be procured by Network Rail through negotiations with rolling stock companies and other third parties, but Network Rail will need to put governance in place to provide assurance that the costs incurred are efficient. We have decided to treat this as a ring-fenced fund, reported in the CP5 enhancements delivery plan. Although we have not made any adjustments to Network Rail's submission, our final determination will adjust these costs to allow for a reasonable level of risk. Any forecast overspend at the end of the control period will then be subject to an ex-post efficiency review.	We welcome the approach on Cab Fitment. Network Rail needs to determine that its delivery programme for both infrastructure and cab fitment is aligned.
9.111	Depots & Stabling and Ancillary Works	An estimate for these works was given to us by DfT, totalling £80m for depots and stabling for the HLOS capacity metric projects, £94m for depot and stabling works resulting from the electrification programme in CP5, and £130m for gauge, platform and electric compatibility works, totalling £312m in CP5. Given that these works are unlikely to be delivered by Network Rail but rather by the train operators or rolling stock suppliers, we have not included this in our calculation of Network Rail"s revenue requirement, because this would benefit Network Rail unnecessarily.	We note the need for an integrated rolling stock, depot and infrastructure plan for CP5.
9.115	Scotland Edinburgh to Glasgow Improvements Programme (EGIP)	We approved a target price for electrification of Springburn to Cumbernauld through the investment framework in January 2013, with the latest forecast of CP5 expenditure at £16m. We have assumed that this is the efficient expenditure for this project rather than Network Rail's SBP proposed cost of £26m.	Part of the work is being delivered by IP but £16m is in accordance with the current spend profile included in the Commercial Agreement
9.117	Scotland	Some of the scope has been developed to GRIP 4 in CP4, such as design for electrification of the Glasgow to Edinburgh via Falkirk High line. However, Network Rail is currently awaiting clarification from Transport Scotland on the detailed requirements and timings for the overall programme. There is still uncertainty around some elements of the scope, for example works at Glasgow Queen Street and Edinburgh Waverley stations. We have assumed Network Rail's most recent estimate of £474m, as a provisional sum and we will decide the efficient cost at a later date, when Network Rail and Transport Scotland have agreed the target price arrangements.	The current programme assumes agreement of a target price for Key Output 1 by Dec 2013. This could then be included in the Delivery Plan. Key Outputs 3 and 4 will not reach this point until 2014.
9.118	Borders	The Scotland HLOS requires completion of this project, to reinstate the former Waverley Line between	The commercial agreement includes £125m in CP5. It is assumed the

Para.	Topic	ORR Statement	Network Rail's Response
		Edinburgh and Tweedbank. Although Network Rail stated that this project is at GRIP 3 in the SBP for planning purposes, the main civil works for this project recently started and the project is on schedule to complete in June 2015. We approved the funding for this project through the investment framework in October 2012, including forecast CP5 expenditure of £127m.	difference is a function of price level differences. At the most recent 'Holding to Account' meeting with TS/ORR some re-phasing of money was discussed, such that the CP5 number is now £174m (including land) and we believe this is robust at this stage. This is due to a better understanding of the contractor's programme particularly in civils and track laying, and a reprofiling of the risk allocation
9.120	Other Scottish projects	Aberdeen to Inverness Improvements (Phase 1) was developed as a programme of works with four phases, planned to be delivered across CP5 and CP6. In response to the HLOS, Network Rail has included the cost of all four phases in CP5, totalling £280m. We have applied some minor adjustments based on the conclusions of the Nichols consortium review. Transport Scotland raised concerns that Network Rail's estimate was too high as it expects this programme to be delivered over two control periods. However, the CP5 scope cannot be confirmed until timetabling work and option selection is complete. We have decided to set a cap for the CP5 expenditure to address Transport Scotland's concerns.	The current programme includes completion of GRIP 3 in Dec 2013. The programme thereafter will be subject to the outcome of the GRIP 3 study and further discussions with TS on the required outputs and timescales of the scheme.
9.122	Rolling programme of electrification	Network Rail included a proposed cost of £171m for this programme. The Nichols consortium reviewed this estimate recommending that around half the scope is sufficiently defined to apply the adjusted efficiency target. We have therefore assumed an efficient cost of £168m.	£171m includes electrification of the R & C line which has now been accelerated to complete in April 2014 with most spend in CP4. This should reduce the programme by c£30m. However, due to difficulties with obtaining possessions, completion may now not occur until June 2014 and discussions are ongoing with TS and ORR on the implications of this. Further work is required on the development of the phases due for implementation towards the end of CP5, particularly the Shotts Line to finalise price and completion date. We anticipate up to £18m of the R&C line expenditure being in CP5. At this stage this is our best estimate but is subject to change when the final programme is agreed with the contractor.
9.123	Motherwell signal box re-signalling and Motherwell Depot stabling	Motherwell signal box re-signalling and Motherwell Depot stabling improvements will support more effective operation of train services in the area, improved servicing of trains and improved track maintenance. Network Rail included CP5 cost estimates of £11m for the Motherwell re-signalling and £10m for the stabling improvements. At the time of SBP publication, it became clear that the southern end of the re-signalling was incorrect, reducing Network Rail's estimate to £3m. We have reviewed Network Rail's estimates for these projects and determined that they are reasonable - £3m for Motherwell re-signalling and £10m for Motherwell stabling improvements.	Motherwell stabling improvements is now being progressed in 2 phases. Phase 1 (c750k) to be completed by May 2014 in advance of implementation of electric services on Cumbernauld/Rutherglen and Coatbridge lines. Phase 2 is being developed to GRIP 2 by September 2013. GRIP 3 is currently planned for completion by September 2014. Motherwell resignalling associated enhancements is now in GRIP 4.
9.125		As explained in chapter 5 Network Rail's support functions provide services to enhancements projects where the costs of these activities are capitalised rather than expensed in the year. Analysis of the SBP showed an additional capitalised cost of £62m in CP5 which did not directly link to its assumptions on support costs and Network Rail has not been able to adequately explain this inconsistency. As a result, we have deducted £62m from enhancement costs across Great Britain. We have divided this amount between England & Wales and Scotland based on current train kilometres and have therefore deducted £6m in Scotland.	See §9.102
9.126		As with other areas of expenditure we have applied an overlay for cost savings that will come about by better management of inflation and better management of occupational health.	See §9.102
9.127		Explained more fully in chapter 18 there are some projects not included in the SBP that will generate an income for Network Rail, which we have considered in Network Rail's other single till income. Therefore,	See §9.102

Para.	Topic	ORR Statement	Network Rail's Response
		we need to include an assumed cost of these projects, £416m across Great Britain. As with the capitalised cost we have divided the total between England & Wales and Scotland based on current train kilometres, resulting in an additional £42m in Scotland.	
9.128		As a result of our recalibration of Schedules 4 and 8 Network Rail requested that we make an allowance of an extra £29m in its enhancements costs. We did not have time to scrutinise this before the draft determination but will do so for the final determination. We have included the extra amount in our revenue requirement calculation.	See §9.102
9.131	Inter-operability	The SBP included the assumption that implementing an interoperable railway would not require specific additional costs in CP5 beyond existing levels of capital expenditure. We have decided that the assumed level of expenditure for maintenance, renewal and enhancements is sufficient to meet the requirements of the interoperability regulations and the TSIs, and therefore our determination is on this basis.	The assumption on the levels of expenditure for maintenance, renewals and enhancements being sufficient to meet the requirements of the Interoperability Regulations and the TSIs is credible provided that there are no significant changes to the way in which those requirements are presented to Network Rail. This assumes that the potential to apply Specific Cases and National Technical Rules prevails for the Control Period (and for the planning stages of CP6), and that RIR 2011 remains unchanged. Should aspects of the Fourth Railway Package materialise during the Control Period then there is a significant risk that the cost-base will increase. Network Rail has discussed with the ORR and DfT the aspects of the 4RP that most put the GB Rail investment programme at risk but it has been too early in 4RP development to make financial provision for the possible consequences.
9.145	Passenger group representation	As in CP4 passenger groups will be involved through RIPG, which will oversee all funds. Passenger interests should be clearly reflected in the governance of the funds with issues that matter to them considered when schemes are selected. This will be done at both the overview level with passenger group involvement and at a local level with train operator involvement. Other organisations such as local authorities and local enterprise partnerships also represent passenger interests. We expect to see evidence that scheme selection meets the needs of passengers.	We believe that it would not be appropriate for Passenger Focus to have direct involvement. We will take account of their published research in setting priority schemes which are then discussed with TOCs/FOCs at RIRG. Collectively this ensures passenger priorities are considered. In addition freight customers are represented on the freight boards which are part of the agreed governance for the freight funds.
9.146	Reporting and transparency	A one-page template, describing each scheme being progressed through the funds, will be published on Network Rail's website. In addition, progress will be reported to the Rail Industry Planning Group and through the enhancements delivery plan.	We have agreed to include this in our delivery plan.
9.147	Scheme selection	A minimum hurdle rate will be set for funds where it is appropriate, such as the NRDF element of the Passenger Journey Improvement fund. The selection criteria should be made transparent and will be set out in the enhancements delivery plan.	We have agreed to include this in our delivery plan.
9.154	Passenger benefits	While the outcome of enhancements do not get specifically picked up in the National Passenger Survey it is probably one of the biggest drivers of satisfaction in areas where the benefits are delivered. Therefore, we will make sure that enforceable milestones are based on the timing of the delivery of passenger and freight customer benefits, as this is what matters to them.	See §9.23

Chapter 10: Deliverability

Para.	Topic	ORR Statement	Network Rail's Response
10.16	ORR analysis and conclusions	However, there are still significant challenges for Network Rail to overcome, including:	
		(a) there is not currently a joined-up and integrated specification and plan covering all infrastructure, rolling stock and depot changes required for CP5. This is needed as soon as possible to give assurance that scope and outputs are aligned and optimised;	We acknowledge the need for an integrated plan
		(b) there are notable concentrations in the scale of work being undertaken by Network Rail in CP5 that inevitably create deliverability risks, for example the Western route which is responsible for about 20% all projects with a total cost of over £3bn including Reading, Crossrail, IEP, several electrification schemes and ERTMS. Network Rail's route plans and our detailed review of the electrification projects provides evidence of the focus and commitment to this major upgrade programme, but this undoubtedly represents a major challenge to efficient and timely delivery. Other examples are the East Coast Main Line and Midland Main Line that have a total of around £2bn of assumed investment;	We are producing route level plans and we will update our deliverability assessment when we publish our draft Delivery Plan.
		(c) the profile of SBP expenditure shows cost falling significantly towards the end of the control period. This appears to be unrealistic for a portfolio that includes so many schemes at an early stage of development and we have made an adjustment to re-profile Waterloo and Electric Spine expenditure towards the end of the control period; and	
		(d) in some areas there will be demand peaks for highly specialised skills.	

Chapter 11: Health and Safety

Para.	Topic	ORR Statement	Network Rail's Response
11.39	Track and off track maintenance and renewals	We want to ensure that in CP5, maintenance volumes and renewals are delivered as required by Network Rail's asset policies and its SBP to provide safe track and off track assets. We are taking a number of steps to ensure that this happens. For example: (a) in our determination, we have assumed a different profile for efficiency assumptions for track maintenance (this includes off track in CP5), giving 16.5% efficiency by the final year of CP5, compared with 13.7% assumed by Network Rail. We do not believe savings can be made beyond 16.5%, partly because of our concern about how rapidly Network Rail can introduce changes without compromising safety; (b) we are strengthening the outputs framework and indicators for asset management and we will be monitoring Network Rail's delivery of planned asset maintenance and renewal volumes; (c) we expect Network Rail to produce an overall maintenance strategy, either as part of its delivery plan or separately, which clarifies how the various maintenance initiatives will be optimised and integrated across the asset base. This strategy should include a change plan to show how the strategy will be delivered taking account of human factors and staff competency issues, and (d) we will continue to audit and inspect the delivery of Network Rail's asset management systems and policies and we will use our regulatory tools to ensure safety.	We will produce a Maintenance Strategy document to the same timescales as the Delivery plan. We will discuss the scope and content of this document further with ORR.
11.50	Conclusions - level crossings	Network Rail should provide us with its plan to maximise the reduction in the risk of accidents at level crossings in CP5 and using the ring-fenced fund, before March 2014. We expect the ring-fenced fund to be; (a) used to deliver the maximum risk reduction irrespective of geographical location (England, Scotland and Wales); (b) retained as a central fund; and (c) used across the whole level crossing portfolio	We will set out in the Delivery Plan the basis for prioritisation (see § 3.82) and detail of the first tranche of schemes in year 1.
11.64	Track worker safety	We have not included Network Rail's proposal for an investment of £100m for alerts for track workers in our determination because Network Rail has not made a compelling case for this investment. Instead, and recognising the importance of track worker safety, our determination includes a ring-fenced fund of £10m for the development of new technologies to alert track workers. We will agree the governance arrangements for this fund with Network Rail before April 2014.	We will treat these as ring-fenced funds and define the outputs we will deliver in the Delivery Plan. We need to agree with ORR how substantive implementation might be funded. We propose that governance will be through the Trackworker Safety Group (on which ORR is represented).
11.73	Road rail vehicles	The draft independent reporter work found that Network Rail has not developed the design of the Liftex machine in sufficient detail to demonstrate its technical feasibility and meet the necessary safety and productivity challenges. However, there was clear potential to deliver productivity and safety improvements and so its development is worthwhile. We recognise the importance of this work from a safety and productivity perspective and our final determination will provide an investment fund for the design development work. As this is a development fund it will be less than the fund proposed by Network Rail of £75m.	We will treat these as ring-fenced funds and define the outputs we will deliver in the Delivery Plan. We need agree with ORR the process for determining the appropriate amount and how substantive implementation might be funded.
11.77	Taking safer and faster isolations	We are satisfied that Network Rail has made a positive case for investment, for taking safer and faster isolations of £190m on the AC and DC networks (£90m for the AC and £100m for the DC network). Network Rail did not provide a sufficient case for investment for the unspecified DC work at £40m and £27m of other investment on the DC network was not in CP5. We have applied an efficiency assumption to the £190m investment, in line with our efficiency assumption for electrical power and fixed plant renewals.	We will treat these as ring-fenced funds and define the outputs we will deliver in the Delivery Plan. We do not agree with the application of efficiency to this funding provision which, as new work was already costed with efficiency incorporated. We are currently examining the potential to accelerate delivery to realise

Para.	Topic	ORR Statement	Network Rail's Response
		We assess efficient expenditure at £163m. We will monitor this expenditure to ensure that it delivers the required safety improvements.	benefits earlier and would like to agree with ORR a basis to extend funding when we have an achievable plan if that shows we can drive greater benefits in CP5 than set out in the SBP.
11.81	Occupational health	In light of our research we have, currently, applied a conservative increase to our overall efficiency estimates of approximately 0.07% per annum across Network Rail's support, operations, and maintenance, renewals and enhancements costs to reflect the savings which could be achieved through improvements in occupational health. This amounts to approximately £20m of savings in the final year of CP5. Further detail is provided in chapter 4.	See response to § 4.55

Chapter 12: Financial Framework

Para.	Topic	ORR Statement	Network Rail's Response
12.25	Inflation and input prices	ORR's view is that general inflation risk is not efficiently controllable by Network Rail (although the more specific risk of input price changes is efficiently controllable by the company and is taken into account in our expenditure assessment). This is consistent with conventional regulatory practice. It also reflects the view of consultees who responded to ORR's August 2012 consultation on detailed financial issues.	Please see main body of our response.
12.27	Inflation and input prices	Reflecting the difference between Network Rail's ability to manage general inflation risk and the more specific risks associated with changes to its input prices, ORR is incentivising Network Rail to efficiently manage inflation risk in CP5 using the following approach: (a) ORR has included in their draft determination, ex-ante forward looking assumptions for both general inflation and input price inflation for CP5; (b) ORR has included their input price assumptions in our efficiency challenge (for CP5 this is zero for all expenditure). This means Network Rail will gain if it delivers on that challenge and lose if it does not deliver the challenge; and (c) ORR has reflected in their efficiency challenge, the findings of a study by Credo, their consultants, who have carried out a study to identify how efficiently Network Rail manages inflation risk.	Please see main body of our response.
12.39	EC4T costs	ORR has determined the efficient level of traction electricity costs and set an ex-ante allowance for each year of CP5. For those elements of the costs that ORR consider controllable by the company, Network Rail is on risk for the outturn being different to the ex-ante assumption. These are: (a) Transmission losses; and (b) Network Rail's own use of EC4T e.g. power supplies for signals and stations	We note that ORR has updated the EC4T forecast to reflect the Department of Energy and Climate Change's latest view of market electricity prices. We note that we will take the risk on any variation between outturn and the forecast rates, related to the electricity consumption paid for by Network Rail, and in relation to a share of the volume discrepancy relating to transmission losses.
12.41	British Transport Police (£71m in 2013-14)	ORR has determined an efficient level for Network Rail's share of British Transport Police (BTP) costs and has set an ex-ante allowance for CP5. ORR consider these costs to be sufficiently controllable by Network Rail and so the risk of the outturn being different from our assumptions will be borne by Network Rail. ORR think that this treatment is important as some of the benefits that are provided by BTP (such as reductions in delay minutes) relate to cost and performance issues that Network Rail is incentivised to deliver. BTP costs will be included in any efficiency or financial performance assessment in CP5.	Please see main body of our response.
12.42	RSSB costs (£9m in 2013-14)	ORR has determined an efficient level for Network Rail's share of RSSB costs and have set an ex-ante allowance for CP5. ORR consider these costs to be sufficiently controllable by Network Rail and so the risk of the outturn being different from our assumptions will be borne by Network Rail. RSSB costs will be included in any efficiency or financial performance assessment in CP5.	Please see main body of our response.
12.43	Licence fee and safety levy (£17m in 2013-14)	As ORR do not think that the licence fee and safety levy is sufficiently controllable by Network Rail, ORR will log-up/down any variances in these costs between the assumptions in their determination and the outturns and the variances will be included in the opex memorandum account. These costs will be excluded from any efficiency or financial performance assessment in CP5.	Network Rail supports ORR's proposal not to expose it to variances in the ORR licence fee and safety levy. ORR correctly identifies that these costs are not controllable by Network Rail and thus any variance between forecast and outturn costs should be logged up/down in the next control period. We consider that like the rest of the industry ORR should be committing to make stretching efficiency improvements in CP5.

Para.	Topic	ORR Statement	Network Rail's Response
12.44	Business (cumulo) rates (£151m in 2013-14)	ORR has decided to include an ex-ante forecast of business rates in Network Rail's CP5 allowed revenue. As long as Network Rail can satisfy ORR that it has negotiated efficiently with the Valuation Offices, ORR will log-up/down any variations from the level we assumed in our determination and adjust Network Rail's allowed revenues in CP6. If we determine that it has negotiated these costs efficiently, then we will exclude these costs from any efficiency or performance assessment in CP5, otherwise we will include them.	Network Rail supports ORR's proposal not to expose it to variations in business rates, subject to Network Rail being able to show that it has negotiated efficiently with the Valuation Office Agency (VOA). However, this should not put ORR in a position of having to second guess management decisions and trade-offs. In addition, we consider that ORR should as far as reasonably possible define "negotiated efficiently" so that we are clear on ' what good looks like' prior to the negotiation process. We also consider that any ex post assessment of negotiation efficiency should be undertaken by an independent third party (e.g. an independent reporter) and that the primary focus should be on our processes.
12.46	Reporters' fees (£3m in 2013-14)	ORR is proposing that they will determine an efficient level of reporters' fees for CP5. If at the end of CP5, Network Rail can show that any material under/over spend is the result of ORR actions instead of being driven by an issue at Network Rail, then ORR will log-up/down the costs of our actions and adjust Network Rail's CP6 revenue requirement through the opex memorandum account in CP5. These costs will be included in any efficiency or financial performance assessment in CP5 but ORR will adjust for variances caused by our actions.	We strongly consider that Reporters' fees should be treated in the same way as the licence fee and safety levy because we do not consider these costs sufficiently controllable by Network Rail. We are also concerned that ORR's proposed approach could have significant unintended consequences and introduce further complexity and administration costs into the existing processes for commissioning Reporters and measuring efficiency/financial performance. We consider that ORR's proposal could result in a disproportionate amount of discussion/negotiation in relation to whether a review is required, who is best placed to carry out the review and the budget for that work. We believe that such discussions could potentially detract from other important issues including the scope of work and end-to-end timescales for completing the review. It could also be argued that ORR has an incentive to commission independent reporters, rather than review Network Rail analysis internally, because outsourcing this work creates more ORR resource which can be allocated to other projects. We have already held some discussions with ORR on how we might be better able to rely on existing sources of information / processes to provide ORR with the information / assurance it requires. As we stated in our response to ORR's consultation on its 2013/14 Business Plan, we believe that the capability of ORR's entire office will be a critical enabler of its aim to be a high performing regulator. In this regard we note that last year's capability review recommended that: "More technical and engineering capability should be brought in-house and the use of Reporters reserved for resource peaks and specialist advice. The credibility of ORR will increase if the industry knows it has a greater breadth of respected and experienced people." With this in mind we believe that ORR is best placed to ensure it achieves an appropriate mix between ORR-led review activity and independent reporter-led activity. During CP4 independent reporter spend increased consistently and substantially during each year of the

Para.	Topic	ORR Statement	Network Rail's Response
			control period and has almost tripled since 2009-10 to a spend of almost £4m in 2012/13. Whilst we accept that some of this increase can be attributed directly to Network Rail (i.e. due to increased focus on the delivery of performance outputs) or linked to the periodic review process we do not consider that it is reasonable to conclude that all of this increase in spent was 'controllable' by Network Rail. We would be concerned, for example, if reporter costs were higher than forecast as ORR did not have the 'in-house' capability that it needs to effectively regulate Network Rail. There are some examples of where this occurred during CP4 (i.e. CH20 – Technical Support). For the reasons discussed, we believe that reporter spend can actually be more effectively controlled by ORR rather than Network Rail and that ORR should be incentivised to consider the overall costs of regulation rather than just its direct costs. In addition, we note that ORR has not defined what it considers to be a "material under/over spend". If ORR were to proceed with its proposed approach, which for the avoidance of doubt we do not consider to be appropriate, it is it important that it provides clarity in relation to how it would assess whether its actions have resulted in an overspend and what it considers would constitute a "material under/over spend". As stated, above, although we consider the most appropriate approach would be to treat Reporters' fee in the same way as the licence fee and safety levy, an alternative to ORR's approach would be to determine an incentive rate for Reporters' fees. We consider that this has a significant advantage over ORR's current proposal in that it would not require an ex post assessment of each review on a case-by-case basis.
12.49	Profit	Network Rail has expressed concerns about the potential impact on profitability of ORR's approach to risk and the adjusted WACC approach. ORR will explore these concerns further with Network Rail before publication of their final determination, in order to support the company being able to manage risk in its business.	We would welcome further discussions with ORR on this important issue prior to the Final Determination.
12.51	Level of financial indebtedness	Also, as in CP4, Network Rail has a balance sheet buffer that can be used to manage risk. ORR will finalise their CP5 assumptions on the level of the balance sheet buffer in their final determination. As an indication, if we assume that Network Rail's financial indebtedness limits are 72.5% for each year of CP5, the balance sheet buffer would be on average during CP5 £2,440m for Great Britain, £2,092m for England & Wales and £349m for Scotland (2012-13 prices). The balance sheet buffer in this example is the difference between a debt/RAB ratio of 72.5% and our forecast of Network Rail's debt/RAB ratio in our determination for each year of CP5.	We continue to stress the importance of sufficient balance sheet headroom and the need to consider this in the context of longer term sustainability of the funding model. We consider that we require 5% above the debt/RAB ratio forecast in our draft delivery plan to be able to manage the potential additional costs of business risks 'crystallising' during CP5. This is consistent with the risk analysis previously provided to ORR which demonstrated that there are operational and financial uncertainties that the business will face in CP5. As part of our response we have updated this analysis and it is attached as a supporting document. We do not believe that, for CP5, the appropriate level of the debt/RAB can be considered in isolation from other metrics. We believe that it is necessary to consider different metrics for different purposes as set out below. This range of metrics suggests that a debt to RAB ratio of over 75 per cent would not be problematic per se because the ability to withstand operational shocks is more closely related to the absolute level of equity and the ability of funders to afford future RAB payments is more

Para.	Topic	ORR Statement	Network Rail's Response
			closely represented by RAB/farebox. The suite of metrics that we consider provide a suitably broad range of measures of our financial sustainability is shown in the table, below. **Sustainability ratios** — **Purpose** Debt / RAB — Measure of financial gearing and exposure to financial markets (RAB – Debt) / OMR — Measure of 'equity' buffer and ability to absorb 'shocks' expressed in terms of coverage of OMR costs RAB / Farebox — Measure of affordability
12.53	Level of financial indebtedness	ORR decided in December 2012 to retain the licence condition which restricts the level of Network Rail's financial indebtedness, and consistent with our aim of improving the disaggregation of Network Rail's price control, ORR will include separate terms in Network Rail's licence for England & Wales and Scotland.	We strongly disagree with ORR's proposal to include separate terms in Network Rail's licence which restrict the maximum level of financial indebtedness (debt/RAB) in CP5 for England & Wales and Scotland. Although England & Wales and Scotland are subject to separate price controls, ORR's proposal is inconsistent with the fact that we raise debt at a corporate level and that the FIM also applies to the company as a whole. From a financing perspective, it is the gearing (expressed as debt/RAB) for the company as a whole which is important to debt and potential equity holders, rather than the notional gearing levels associated with Network Rail routes, which are not separate legal entities with the ability to raise finance independently. We consider that if ORR were to confirm this proposal it would unnecessarily constrain our ability to raise finance without introducing any significant benefits. We also note that it is possible to report the notional gearing levels for England & Wales and Scotland without introducing a licence condition restricting the respective levels of financial indebtedness.
12.54	Level of financial indebtedness	ORR will finalise the specific levels of Network Rail's maximum level of financial indebtedness in each year of CP5, in their final determination, as the levels need to reflect the entire PR13 package. ORR's current thinking based on their financial modelling is that the level of financial indebtedness in each year of CP5, should at no point exceed a limit set between 70-75% for England & Wales and Scotland. ORR will conclude on the level of the limits in the final determination.	We continue to stress the importance of sufficient balance sheet headroom and the need to consider this in the context of longer term sustainability of the funding model. We consider that we require 5% above the debt/RAB ratio forecast in our draft delivery plan to be able to manage the potential additional costs of business risks 'crystallising' during CP5. This is consistent with the risk analysis previously provided to ORR which demonstrated that there are operational and financial uncertainties that the business will face in CP5. As part of our response

Para.	Topic	ORR Statement	Network Rail's Response
			we have updated this analysis and it is attached as a supporting document. We do not believe that, for CP5, the appropriate level of the debt/RAB can be considered in isolation from other metrics. We believe that it is necessary to consider different metrics for different purposes as set out below. This range of metrics suggests that a debt to RAB ratio of over 75 per cent would not be problematic per se because the ability to withstand operational shocks is more closely related to the absolute level of equity and the ability of funders to afford future RAB payments is more closely represented RAB/farebox. The suite of metrics that we consider provide a suitably broad range of measures of our financial sustainability is shown in the table, below. **Sustainability ratios** — **Purpose** Debt / RAB — Measure of financial gearing and exposure to financial markets (RAB – Debt) / OMR — Measure of 'equity' buffer and ability to absorb 'shocks' expressed in terms of coverage of OMR costs RAB / Farebox — Measure of affordability
12.68	Treatment of financing costs	It is important that Network Rail efficiently manages its financing costs, so we have reviewed Network Rail's embedded debt costs as part of the periodic review process. We have included Network Rail's embedded debt costs in this determination, where we consider that these costs were incurred efficiently. This should help to ensure that Network Rail faces the financial consequences of its actions in the run up to our PR13 final determination, i.e. it cannot take out debt and just assume that we will allow the costs associated with it. Our views on the efficiency of Network Rail's embedded debt costs are discussed further in the impact of financial framework on financial parameters chapter (chapter 13).	Please see main body of our response.
12.80	Opening debt	We have reviewed Network Rail's forecasts of CP4 closing debt and consider that it is appropriate to use its forecasts as our opening balance for CP5 for our draft determination as they are consistent with the income and expenditure assumptions used elsewhere in this document. We will review these assumptions for our final determination.	Our current view of the opening debt for CP5 is higher than in the Draft Determination.
12.100	RAB roll forward	(d) refers to adjustments for missed outputs but does not give any criteria for determining when and by how much a non-delivery would lead to a RAB reduction.	Please see the main body of our response, *The approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures*.
12.100	RAB roll forward	(e) this lists criteria that should be met before ORR allows NR to retain the benefit of efficient underspend, for example: (1) minimum confidence grades for efficiency reporting, (2) identifying the positive management actions that resulted in the saving, (3) meeting improvements in asset management, and (4) delivering outputs.	Please see the main body of our response, *The approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures*.
12.102	RAB roll forward	The main differences between our RAB roll forward policy in CP5 compared to CP4 will be:	We welcome the clarification in a, b, c and e, but do not support d. The

Para.	Topic	ORR Statement	Network Rail's Response
		(a) we will not adjust our renewals assumptions for movements in the IOPI index; (b) overspend relating to additional volumes of work or unit costs for renewals in England & Wales and Scotland will be added to the RAB, unless the overspend is manifestly inefficient. This is instead of having a complicated efficiency test; (c) there will be no enhancement deadband; (d) before we allow Network Rail to retain the benefit of an efficient underspend, it will need to show that it has successfully implemented a package of improvements on asset management and improved its reporting systems and processes as described above; and (e) as we are using the adjusted WACC approach to Network Rail's cost of capital there is no ring-fenced fund in CP5, there will be no adjustment for the element of renewals and enhancements that are funded by a ring-fenced fund.	reasons for objecting to d are given in the main body of our response, *The approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures.*
12.106	RAB roll forward	(h) as part of our on-going regulation of Network Rail, we will ensure that if it fails to either deliver any required outputs in CP5 or maintain the serviceability and sustainability of the network in the short, medium or long-term, then it will not retain the associated financial benefit. We will do this by either making an appropriate deduction from the RAB or not funding the company for any deferred work that it will be doing in CP5 as appropriate. We will make this adjustment regardless of whether there is an underspend or overspend. We will also make an adjustment for capitalised financing on the logged down amount and Network Rail will not retain 25% of an underspend.	Please see the main body of our response, *The approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures*.
12.107	RAB roll forward	(d) as PR13 is an output based determination, Network Rail should not benefit from a failure to deliver its required outputs. Therefore, in PR08 the adjustments for the non-delivery of outputs were based on the amounts of money saved by not delivering the outputs or failing to maintain the serviceability and sustainability of the network in the short, medium or long-term. This would include any savings in support costs, operations costs, maintenance costs and income. For PR13, we are discussing with Network Rail whether a value based adjustment would be more appropriate and we would welcome comments on the issue;	Please see the main body of our response, *The approach to monitoring and measuring our business performance is complicated and includes hurdles based on subjective measures*.
12.107	RAB roll forward	(e) given the information asymmetry between Network Rail and us, it is for Network Rail to show that a reduction in work volumes is efficient and does not inappropriately affect the serviceability and sustainability of the network in the short, medium or long-term. Where Network Rail cannot show that a reduction in volumes is efficient, any cost savings related to the deviation from the current agreed asset policies will be deemed inefficient and the related cost savings will be deducted from the RAB without Network Rail retaining 25% of the benefit. As in PR08 the burden of proof will be on Network Rail to show that it has delivered its required outputs. We will conclude about whether we should provide guidance on how an adjustment should be calculated for a failure to deliver required outputs in our RAGs in December 2013;	We disagree that being unable to prove cost savings are efficient means that they should be deemed to be inefficient. There is an established means of assessing the sustainability of our asset policies and we believe the same approach should be taken when ORR or the reporter assess sustainability for financial performance purposes. The reason for stressing the importance of this is that some of the recent statements from ORR and Arup have indicated a different approach that we consider to be subjective. It is interesting to note that in §3.35 ORR concludes that there is only a 45% confidence in meeting the PPM target. Given this, we see very little prospect of being able to demonstrate that any cost saving is efficient. The mechanism therefore provides an incentive to overspend rather than an incentive to strive for savings. The presumption should be that underspend is efficient and it should be the aggregate variance that is

Para.	Topic	ORR Statement	Network Rail's Response
			important in order to avoid detailed reconciliations and bureaucracy.
12.107	RAB roll forward	(j) to avoid undue complexity, agreed deferrals of expenditure from CP4 to CP5 (e.g. for elements of the electrification programme) will be treated under the CP5 RAB roll forward policy, unless agreed otherwise.	Consistent with the current approach, we strongly believe that 100% of the efficient cost of the agreed deferral should be logged-up. We also need to agree more broadly the approach to assessing rollover from CP4.
12.120	Spend to save	We are proposing to change the incentives on spend to save schemes so that the incentive is 25% in year 1 of the control period, 20% in year 2 of the control period, 15% in year 3 of the control period, 10% in year 4 of the control period and 5% in year 5 of the control period. This means that, for example, if Network Rail overspends/underspends in year 1 by £100, they will bear/retain £25 of the cost of that overspend/underspend but if it overspends/underspends in year 5, it will bear/retain 5% of the overspend/underspend. This compares to our normal RAB roll forward approach where, in simple terms, Network Rail retain 25% of an underspend and bear 25% of an overspend in each year of the control period.	We propose that the scope of the framework should be extended to cover all investment that enables improvements in the cost of operating, maintaining, renewing and enhancing the railway. This should include wheeled plant & other NDS schemes, corporate offices & depots as well as Information Management schemes. Our proposal to extend the framework to cover all investments that enable improvements in the cost of operating, maintaining, renewing and enhancing the railway is based upon evidence from CP4 schemes that have been implemented. For example we have undertaken the design and build of a concrete sleeper factory, to lower the unit cost of concrete sleepers to Network Rail. This investment is expected to achieve more than 150% of the capital investment within 5 years. Other schemes include the Rail Operating Centres and the National Centre in Milton Keynes which will deliver reductions in operating expenditure. It is unclear how the income and expenditure will be treated in the assessment of overall financial performance but we believe they should be treated as assumptions for the purposes of determining the revenue requirement and not as targets. We would not be able to outperform by spending less, but we would want ORR to agree that if more "good" schemes are identified, then the expenditure can be added to the RAB following ORR approval in the normal way. We have analysed a number of NDS, property and IT schemes undertaken during CP4. The analysis demonstrated that the overall payback achieved or is expected varies from a little under 5 years to around 15 years and shows that for most schemes there is a lag between when the investment was undertaken and the commencement of the financial savings. The lag between the investment taking place and savings being made may not allow good schemes to achieve the required efficiency targets. We therefore suggest that the ORR incentives are reduced by 1 year starting with 20% in year 1 and going down to 0% in year 5.
12.123	Non-capex additions to the RAB and the opex	In our December 2012 decisions document, we explained that we had decided to retain the use of the opex memorandum account for CP5. This is because it:	We support the retention of the Opex memorandum account and agree it should continue to cover the same items as in CP4. For example this

Para.	Topic	ORR Statement	Network Rail's Response
	memorandum account	(a) avoids distorting the RAB; (b) is more transparent; (c) formalises the way these issues are resolved, which reduces regulatory risk; and (d) allows us to smooth the effect, of the release of monies in this account to Network Rail, on Network Rail's income and charges.	would include: incentive payments, errors in the determination, variations in non-controllable costs, and any other variations caused by unforeseen events that ORR agrees should be compensated through the mechanism.
12.141	Investment framework/spend to save	In order to improve transparency and provide clearer incentives on Network Rail without overly complicating the financial framework, we are proposing to remove the internal/Network Rail investment framework and apply our normal RAB roll forward process to deal with spend to save schemes but amend the RAB roll forward process as described below, e.g. use different incentive strengths. The amendment we are proposing to make is to change the amount of financial benefit Network Rail will retain/bear if it underspends or overspends. We would welcome comments on this issue.	We propose that the scope of the framework should be extended to cover all investment that enables improvements in the cost of operating, maintaining, renewing and enhancing the railway. This should include wheeled plant & other NDS schemes, corporate offices & depots as well as Information Management schemes. Our proposal to extend the framework to cover all investment that enable improvements in the cost of operating, maintaining, renewing and enhancing the railway is based upon evidence from CP4 schemes that have been implemented. For example we have undertaken the design and build of a concrete sleeper factory, to lower the unit cost of concrete sleepers to Network Rail. This investment is expected to achieve more than 150% of the capital investment within 5 years. Other schemes include the Rail Operating Centres and the National Centre in Milton Keynes which will deliver reductions in operating expenditure. It is unclear how the income and expenditure will be treated in the assessment of overall financial performance but we believe they should be treated as assumptions for the purposes of determining the revenue requirement and not as targets. We would not be able to outperform by spending less, but we would want ORR to agree that if more "good" schemes are identified, then the expenditure can be added to the RAB following ORR approval in the normal way. We have analysed a number of NDS, property and IT schemes undertaken during CP4. The analysis demonstrated that the overall payback achieved or is expected varies from a little under 5 years to around 15 years and shows that for most schemes there is a lag between when the investment was undertaken and the commencement of the financial savings. The lag between the investment taking place and savings being made may not allow good schemes to achieve the required efficiency targets. We therefore suggest that the ORR incentives are reduced by 1 year starting with 20% in year 1 and going down to 0% in year 5.
12.142	Investment	We are proposing to change the incentives on spend to save schemes so that the incentive is 25% in	See comment on §12.120, above.

Para.	Topic	ORR Statement	Network Rail's Response
	framework/spend to save	year 1 of the control period, 20% in year 2 of the control period, 15% in year 3 of the control period, 10% in year 4 of the control period and 5% in year 5 of the control period. This means that, for example, if Network Rail overspends/underspends in year 1 by £100, they will bear/retain £25 of the cost of that overspend/underspend but if it overspends/underspends in year 5, it will bear/retain 5% of the overspend/underspend. This compares to our normal RAB roll forward approach where, in simple terms, Network Rail retain 25% of an underspend and bear 25% of an overspend in each year of the control period.	
12.162	Network Grant	Network Rail has said that it will publish an update of its policy on the use of outperformance by the end of March 2014.	In October 2007, we published our Business Planning Criteria, which set out the principles for how to use financial outperformance. We are committed to publishing an updated version of our policy on how financial outperformance should be used for CP5. We plan to publish this by the end of March 2014.
12.162	Use of financial outperformance	Given the importance that we place on Network Rail's financial sustainability, we think that any financial outperformance should be used to pay down debt or fund R&D projects up to a maximum value that will be decided in our final determination.	Given the changes in the financial framework for CP5 we might expect to focus outperformance primarily on reducing debt or longer term investment in R&D. However, we do not believe that other uses of outperformance should be excluded as a matter of principle by ORR at this stage and that it is inappropriate to constrain the use of any financial outperformance in this way. By way of example, other areas where it could be appropriate to reinvest any financial outperformance include civils activity, additional expenditure at level crossings or the delivery of otherwise unfunded enhancements. As we have discussed in our response to ORR's PR13 implementation consultation, we strongly consider that consistent with our overall network stewardship obligation set out in the network licence, we believe that it is for Network Rail to determine how best to reinvest any financial outperformance. We strongly disagree with ORR's proposed restriction on exactly how any outperformance must be used and consider it to be disproportionate, for the reasons discussed, above.
12.169	The 'corporation tax double count'	As part of PR13 we have reviewed our approach to the corporation tax double-count. As a result of this review, we have decided to change our approach so that the value of the double count is deducted from Network Rail's opening RAB at the start of CP5. We think that this is more appropriate because it is more transparent than the PR08 approach.	As stated previously, and set out in detail in the paper prepared by Oxera, we do not agree with ORR's quantification of the corporation tax 'double count'. However, we accept that ORR has concluded on this matter and, therefore, welcome the 'cleaning up' of the RAB to resolve this issue once and for all. We agree that the revised approach is more transparent than that which ORR determined in PR08.
12.175	VAT	We have reviewed how value added tax issues could affect Network Rail in CP5. This was informed by a study by our consultants, Alvarez & Marsal. The potential claims in relation to outstanding historic issues are uncertain and Network Rail has not forecast in its SBP that they will receive any benefit from these potential claims. Network Rail's assumption is conservative. Given the uncertainty of these claims, we will assume that Network Rail does not receive any benefit from these potential VAT issues in CP5. We	We strongly disagree with ORR's proposal to adjust, in CP6, for any financial benefits that we receive in CP5 in relation to VAT policy challenges, and to exclude any such gains from our financial performance in CP5. ORR's proposed approach would serve to remove the current financial incentive to pursue potential VAT rebates.

Para.	Topic	ORR Statement	Network Rail's Response
		are also proposing to adjust CP6 for any benefit that Network Rail receives in CP5 from these VAT issues and we are proposing not to include any of these VAT gains in financial performance in CP6.	In addition, this approach is totally inconsistent with the established principles of incentive based regulation. We consider that the regulatory framework should incentive us to behave like a 'conventional' company, which would include pursuing VAT rebates, rather than create a perverse incentive for us to 'do nothing'. We understand that our government funders also wish us to pursue such VAT opportunities. Thus we consider that the regulatory framework should support this and that ORR should welcome any rebates that we are able to realise. As ORR correctly identifies in its Draft Determination, we consider any potential future rebates are highly uncertain and thus, whilst being transparent about potential future opportunities, we did not include a financial adjustment in our SBP for an estimate of our 'expected value' of such rebates. Given the significant uncertainty associated with potential future VAT rebates and the resultant low expected value of any payments (estimated in our SBP to be c.£1m), we continue to consider our approach to be reasonable. A stated, above, we strongly consider that ORR should revise its proposed approach so that the regulatory framework is consistent with the principles of incentive based regulation and does not create a perverse incentive for us to be indifferent toward pursuing VAT rebates. We also note that ORR has not clearly articulated what it considers the benefits to be of removing our incentive to pursue VAT rebates. We consider that it is important for Network Rail to act commercially with regards to possible VAT rebates, and that any such rebates should also contribute to our financial outperformance. One way to do this, whilst recognising ORR's concerns, would be to introduce a mechanism that rewarded a share of any such rebates to Network Rail. We would welcome discussing this further with ORR before it concludes on the matter in its Final Determination.
12.179	Financial ring fence	Discussions with stakeholders have not reached a stage where it is appropriate to further review the activities that Network Rail is permitted to carry out under the provisions of its network licence as part of PR13, especially as the current de-minimis provisions in Network Rail's network licence already provide a reasonable approach to these issues. If following the conclusion of these discussions, we think it is appropriate to propose a review of the activities that Network Rail is permitted to carry out under the provisions of its network licence, we will do so after PR13.	As outlined in our response to ORR's consultation on the implementation of PR13 we believe that the regulatory regime must be open to evolution as Network Rail demonstrates greater responsibility, transparency and accountability. We believe that a more fundamental review of Network Rail's permitted business and '*de minimis'* licence conditions should be undertaken as soon as possible after the conclusion of PR13. As a

Para.	Topic	ORR Statement	Network Rail's Response
			starting point we consider that certain 'core' Network Rail activities should be reclassified. By way of example, in order to achieve the very challenging property income targets that are set out in ORR's draft determination (as well as maximising revenues from our existing property portfolio), significant investment will be required in order to grow our long-term single till income. We are also considering how our telecoms and energy business activities might be commercialised so as to grow our revenue streams and in turn reduce our reliance on tax payer subsidy. We recognise that we will need to ensure that any such activities do not overly distract Network Rail from its core business functions and present an acceptable level of risk and reward to Network Rail and our funders.
12.180	Financial ring fence	In our consultation on the changes to contractual and licensing provisions to implement PR13 that we will publish on 12 July 2013, we will identify any areas where the financial ring-fence needs to be updated. In particular, we will consider whether changes to other regulators' financial ring-fences are relevant, as we want to keep the financial ring-fence up to date with regulatory best practice.	We welcome ORR's commitment to keeping the financial ring fence up to date with regulatory practice and we set out more detailed comments in this regards in our response to ORR's consultation on the implementation of PR13. Without prejudice to any more detailed comment regarding the financial ring fence licence condition we believe that our current regulatory obligations concerning '*de minimis*' activities are unduly prescriptive, difficult to understand and give ORR unnecessary powers of 'veto'. We also consider that certain 'core' Network Rail activities should be reclassified.

Chapter 13: Impact of financial framework on financial parameters

Para.	Topic	ORR Statement	Network Rail's Response
13.13	Embedded debt	We have included CEPA's estimate of Network Rail's embedded debt costs in our determination. We will update this assumption for our final determination to take account of any additional efficient debt issued before then.	Please see main body of our response.
13.14	New debt	CEPA's analysis is based on current interest rates, market information and their view of an appropriate treasury strategy. For our final determination, we will review whether our assumptions need to be updated, e.g. for movements in market rates. Any adjustments we make will be consistent with an efficient treasury strategy.	Please see main body of our response.
13.21	FIM fee	Given these factors, we have decided that the fee payable to DfT for the provision of the FIM will be set at 1.10% on the outstanding FIM-backed debt during CP5. We think that this fee broadly reflects the long-run value of the credit enhancement that Network Rail benefits from as a result of the FIM.	Please see the main body of our response.
13.22	Tax	Our consultants, Alvarez & Marsal, have reviewed Network Rail's forecast corporation tax position and we have made some relatively small adjustments to Network Rail's corporation tax forecasts. As discussed in the financial framework chapter (chapter 12), we have assumed that Network Rail does not receive any benefit from potential VAT issues in CP5.	We strongly disagree with ORR's proposal to adjust, in CP6, for any financial benefits that we receive in CP5 in relation to VAT policy challenges, and to exclude any such gains from our financial performance in CP5. ORR's proposed approach would serve to remove the current financial incentive to pursue potential VAT rebates. In addition, this approach is totally inconsistent with the established principles of incentive based regulation. We consider that the regulatory framework should incentive us to behave like a 'conventional' company, which would include pursuing VAT rebates, rather than create a perverse incentive for us to 'do nothing'. We understand that our government funders also wish us to pursue such VAT opportunities. Thus we consider that the regulatory framework should support this and that ORR should welcome any rebates that we are able to realise. As ORR correctly identifies in its Draft Determination, we consider any potential future rebates are highly uncertain and thus, whilst being transparent about potential future opportunities, we did not include a financial adjustment in our SBP for an estimate of our 'expected value' of such rebates. Given the significant uncertainty associated with potential future VAT rebates and the resultant low expected value of any payments (estimated in our SBP to be c.£1m), we continue to consider our approach to be reasonable. A stated, above, we strongly consider that ORR should revise its proposed approach so that the regulatory framework is consistent with the principles of incentive based regulation and does not create a perverse incentive for us to be indifferent toward pursuing VAT rebates.

Para.	Topic	ORR Statement	Network Rail's Response
			We also note that ORR has not clearly articulated what it considers the benefits to be of removing our incentive to pursue VAT rebates. We consider that it is important for Network Rail to act commercially with regards to possible VAT rebates, and that any such rebates should also contribute to our financial outperformance. One way to do this, whilst recognising ORR's concerns, would be to introduce a mechanism that rewarded a share of any such rebates to Network Rail. We would welcome discussing this further with ORR before it concludes on the matter in its Final Determination.
13.23	Opening debt	The opening debt assumptions at the start of CP5 used in this determination are based on Network Rail's SBP forecast debt balances at the end of CP4. As part of its review of Network Rail's financing costs, CEPA assessed Network Rail's debt issuance programme through CP4 to date and found no evidence that Network Rail's debt strategy was inefficient. As part of our final determination, we will review whether Network Rail's assumptions are still appropriate, e.g. there might be changes to renewals and enhancement schemes, which affect debt.	Our current view of the opening debt for CP5 is higher than in the Draft Determination.
13.80	Cost of capital	We have considered the views of CEPA and Oxera, and we have taken into account the decisions of other regulators, e.g. Ofgem and CAA. Given the changes in the financial markets and in particular the cost of debt, we think it is appropriate to propose a cost of capital of 4.31% (real vanilla) for Network Rail in CP5. On a pre-tax basis this is 4.91%.	ORR has proposed a pre-tax weighted average cost of capital of 4.91%. We consider that it would be more appropriate to use 5% recognising the uncertainty in this calculation, with a figure of 4.91% suggesting a level of precision that is unrealistic. OXERA's supporting document 'Review of ORR's Cost of Capital Proposals' states that 5%-5.25% would "still represent a significant shift from the 6% applied at present". Given that ORR's proposals seen 'in the round' represent a considerable tightening of our financeability, this slight increase to 5% is appropriate.

Chapter 16: Access Charges

Para.	Topic	ORR Statement	Network Rail's Response
16 (overall)	Capacity charge	ORR is consulting on RFOA's proposal for freight capacity charges.	We discuss this issue in detail in the main body of our response. RDG has proposed a way forward for the capacity charge in CP5. We fully support the RDG position, which is set out in our supporting document, "*Letter from Paul Plummer to ORR which sets out RDG's proposed approach for Schedule 8 rates, the capacity charge and volume incentive for CP5*".
16.78	VUC	ORR considers that the Serco analysis should be reflected in VUC because it sends the right price signals to operators, customers, and others in the value chain regarding choice of vehicle and use of the infrastructure.	As set out in our April 2013 VUC conclusions document, we consider that the revised methodology, developed by Serco, represents a step-change improvement in our understanding of the drivers of vertical track damage. In our conclusions document we proposed that the Serco methodology should be introduced from the start of CP6, in order to allow the industry, particularly freight operators, time to prepare for changes in VUC rates that would result from implementing the revised approach. In particular, we highlighted the potential 'price turbulence' that freight operators would face if this change to VUC rates, and the new Freight-Specific Charge, were both to be implemented in full. Following careful consideration of ORR's Draft Determination in relation to access charges, including the measures it has taken to mitigate increases in freight charges (e.g. placing a cap on the maximum increase in the average VUC), we accept ORR's proposal to reflect the Serco analysis in VUC rates from the start of CP5. We consider, however, that all operators should assume that the Serco methodology is implemented in full in CP6 when making procurement decisions, for example.
16.89	VUC	ORR agrees with NR that temporary default rates should be set at highest level, incentivising TOCs to provide correct vehicle data more quickly.	We strongly support this.
16.122	Capacity Charge	ORR have concluded that they will not implement the recalibrated capacity charges as part of PR13. ORR will instead either implement the alternative proposal put forward by freight operators (possibly applying it also to open access passenger operators and/or franchise passenger operators, having regard to their views on this), or approve capacity charge rates that have been calculated using the methodology established in CP4, uprated for inflation.	The industry has developed an agreed position on this matter. This is set out in the main body of our response, and our supporting document, "*Letter from Paul Plummer to ORR which sets out RDG's proposed approach for Schedule 8 rates, the capacity charge and volume incentive for CP5*".
16.124	Capacity Charge	ORR recognise that by setting the capacity charge below the marginal Schedule 8 cost associated with a change in traffic, they are potentially disincentivising Network Rail to accommodate extra traffic. However, in our judgement this is preferable to introducing the recalibrated rates. They consider that the volume incentive serves to offset this effect. The reduction in charges revenue associated with this decision will result in a commensurate increase in FTAC levied on franchise passenger operators.	The results of our analysis do not support ORR's suggestion that the volume incentive will offset the disincentives created by its proposal.
16.150	Coal Spillage Charge	We are concerned, however, about what appears to be missed opportunities to record incidents of coal spillage, and we are asking Network Rail to improve its records of such incidents in CP5	We recognise the potential benefits, for charging purposes, of improving how we record of incidents of coal spillage. With the aim of informing the level of the Coal Spillage Charge in CP6, during CP5 we will look at potential ways of improving how we report incidents of coal spillage. In doing so we will have to be mindful of operational constraints (remedying

Para.	Topic	ORR Statement	Network Rail's Response
			incidents of coal spillage is often done in challenging line side conditions) and the materiality of Coal Spillage Charge income.
16.173	EC4T charges	ORR confirms the regenerative braking discounts for modelled operators that Network Rail has proposed, but require that Network Rail carry out more work understanding losses associated with regenerative braking, for implementation as part of PR18.	We are committed to carrying out further work during CP5 to understand the level of transmission losses associated with regenerative braking, and we will be publishing annual reports on transmission losses.
16.180	EC4T	ORR's presumption will be that major new pieces of electrified infrastructure will be established as one or more new ESTAs for CP5 (with ESTA definitions revisited as part of PR18), unless there are sound engineering or practical reasons to conclude otherwise.	It is unlikely that all new pieces of electrified infrastructure will be established as one or more new ESTAs (Electricity Supply Tariff Area) for CP5. We strongly consider that setting this approach as the standard for CP5, may reduce technical efficiency, and restrict useful industry discussions to facilitate maximum efficiency. We have already started to look at the potential changes to ESTAs in CP5, as a result of the additional electrification under construction and planned for implementation in CP5. The electrification system designs are subject to a number of iterations to ensure best value for money, provision for likely service enhancements and safety considerations before the design is finalised. After these areas have been confirmed, decisions can then be made about optimum ESTA arrangements. Examples of forthcoming projects, which will impact ESTA arrangements are the North West electrification; Crossrail; East Coast Main Line; Great Western Main Line; and Midland Main Line. A good example of a project where the creation of a new ESTA will not be appropriate is Crossrail. Although Crossrail is not due to commence operation until 2018, it is likely that the revised electrical feeding will be introduced in 2017 or perhaps earlier. With a long tunnel section in the middle of the route, it will not be sensible to put ESTA boundaries near the tunnel mouths as there would be significant location errors when trains enter and leave the tunnel. We are likely to propose that ESTA V (Great Western) corresponds as far as possible to the whole Crossrail operational area (Maidenhead to Shenfield and Abbey Wood). This would result in the transfer of the Liverpool Street to Shenfield section of ESTA P (Great Eastern) to ESTA V (Great Western). We are fully committed to being open and transparent about our proposals for changing ESTAs going forward (see response to ORR's consultation "Implementing PR13").
16.184	EC4T charges	ORR confirms the formulation for Network Rail to share the volume wash-up in each ESTA on which it consulted. In this, Network Rail's share of the wash-up, over and above that associated with its own use, reflects the proportion of costs for which it has control through its management of transmission losses. We illustrated how this might work with some examples in our April 2013 consultation, and we will specify how we propose to contractualise this in our 12 July 2013 consultation on implementation.	We have provided detailed comments on this proposal in our response to ORR's consultation on "Implementing PR13".
16.195	EC4T charges	When provisions have been added to the traction electricity rules that put Network Rail's metered consumption on an equivalent footing to that of metered services, ORR will approve its exemption from the volume wash-up. ORR expect that, under Network Rail's leadership, this can be achieved before April	We have provided detailed comments on this proposal in our response to ORR's consultation on "Implementing PR13".

Para.	Topic	ORR Statement	Network Rail's Response
		2015 (in time for the 2014-15 volume reconciliation), so that in practice Network Rail's metered consumption is exempted from the volume wash-up for the whole of CP5.	
16.195	EC4T charges	Network Rail's consumption and that of third parties is not currently reflected in the track access contract, though in practice such modelled consumption is treated on a consistent basis to that of modelled consumption by operators in Network Rail's allocation of the volume wash-up. ORR will contractualise this, so it is reflected in the traction electricity rules in CP5.	We have provided detailed comments on this proposal in our response to ORR's consultation on "Implementing PR13".
16.332	LTC	We have adjusted Network Rail's SBP submission on station LTC income to reflect our view of efficient CP5 stations MRR expenditure on buildings and SISS.	Following the publication of the Draft Determination, ORR required Network Rail to update its draft CP5 price lists. The updated draft franchised and managed station price lists for CP5 were published on 12 July 2013. The price lists included the recovery of maintenance; renewal and repair expenditure in CP5 on both operational property and SISS assets. While we carried out ORR's requirements to publish draft CP5 price lists consistent with its Draft Determination, we are concerned that ORR has proposed a 15 per cent reduction in pre-efficient expenditure compared to the SBP for the bulidings portfolio (excluding managed stations), which is discussed in further detail in the main body of our response. The reduction in activity implied by the level of expenditure proposed will have implications for the sustainability of franchised station outputs and will lead to sub-optimal whole life costs.

Chapter 18: Other single till income

Para.	Topic	ORR Statement	Network Rail's Response
18.26	Property rental and property sales income	We agree with DTZ that Network Rail's forecast of property income in CP5 in its SBP is too conservative, primarily due to the reasons outlined above and we think that DTZ's range was based on reasonable adjustments to Network Rail's assumptions but some of those adjustments may have been too cautious.	Please see the main body of our response.
18.27	Property rental and property sales income	Therefore, we have decided that in our determination we will use the "upper" end of DTZ's range of property income for Great Britain (£1,656m of property rental and £177m of property sales for Great Britain), this total income of £1,833m for Great Britain is 25.7% higher than Network Rail's SBP. We consider this assumption will be challenging but achievable and in reaching our decision we have taken account of Network Rail's response to DTZ's report.	Please see the main body of our response.
18.28	Property rental and property sales income	Also, Network Rail's SBP forecast income in Tables 18.1, 18.2 and 18.3 above excludes income relating to projects which were not specifically identified by Network Rail at the time it prepared its SBP, but nevertheless based on previous experience, it can be reasonably predicted that some opportunities for future developments will materialise. Therefore, we have included an estimate of the future income from these schemes of £122m for Great Britain in our draft determination in Table 18.4 above (based on DTZ's "high" scenario, which was uplifted from its base forecast of £120m). In our enhancements determination in the enhancements chapter (chapter 9), we have included Network Rail's forecast of £231m of capital expenditure required to deliver these projects.	Please see the main body of our response.
18.29	Crossrail finance charge and Welsh Valleys finance charge	We have amended the financing charges for the Crossrail and Welsh Valleys projects to reflect Network Rail's real "vanilla" WACC of 4.31% for CP5, as described in the impact of financial framework on financial parameters chapter (chapter 13), as Network Rail assumed a real "vanilla" WACC of 4.75%. For the Welsh Valleys finance charge, we have also reduced the finance charge assumption in our determination to reflect our adjustment to the project's efficient capital cost (this is discussed in the enhancements chapter (chapter 9)).	We broadly agree with this approach. Our expectation is that income from Crossrail will be £297.7m compared to £298.1m assumed by ORR in the Draft Determination. We understand that the difference is due to a simplifying assumption made by ORR in calculating the Finance charge and expect ORR will adopt the 'corrected' figure for the Final Determination.
18.30	Facility charges – station, depots and track	There are two types of projects that generate station, depot and track facility charges. First, those projects that are included in Network Rail's SBP. We have used Network Rail's estimates of income as this is based on projects that are already in place but adjusted the income to reflect our 4.91% (real, pre-tax) cost of capital assumption (described in the impact of financial framework on financial parameters chapter (chapter 13)), as Network Rail assumed in its SBP that the cost of capital would remain unchanged from CP4 (6%).	We broadly agree with this approach. We note that ORR has not made any adjustments to a number of other income sources around stations and depots, such as station and depot lease income and qualifying expenditure. We consider that it is important that, if substantial changes are made by ORR, an appropriate process should be followed and Network Rail should be fully consulted. We would ask that ORR clarifies its plans for engagement and consultation around these items.
18.31	Facility charges – station, depots and track	Second, there are speculative projects which are not yet known and not included in Network Rail's SBP. We think that it is important that our determination reflects as closely as possible Network Rail's likely income in CP5 and the associated capital expenditure even when the project is not yet specifically known. Therefore, for these projects we have based our assumptions on Network Rail's "central" scenario for these projects, which was for Great Britain £37m per annum (2012-13 prices) of capital expenditure, as this is a reasonable assumption given the uncertainty in this forecast. This is based on the trend in CP4 but excludes large one-off projects like Evergreen and the Nottingham hub, as projects of this magnitude are unlikely to occur with such frequency during CP5. Based on the 4.91% cost of capital (pre-tax, real), we estimate this will yield total income for Great Britain of £58m (2012-13 prices) in CP5.	This seems to be appropriate.
18.34	Other charges (HS1	Network Rail has assumed in its SBP that net revenues from HS1 will fall from £10.4m to £6.5m as a	We have written to ORR separately on this matter, and we welcome ORR

Para.	Topic	ORR Statement	Network Rail's Response
	and TOC insurance)	result of PR14 (HS1 periodic review). We consider that it is not appropriate to prejudge that process and therefore we have not included that adjustment. Therefore, our assumption is that the income Network Rail will receive from HS1 will be unchanged at £10.4m per annum.	reconsidering its position on this matter.

Chapter 19: Financial Incentives

Para.	Topic	ORR Statement	Network Rail's Response
19.13	REBS	ORR states that it has decided that their PR13 final determination cost assumptions for England & Wales and Scotland will act as REBS baselines in CP5. Network Rail will be able to set REBS baselines for the nine England & Wales (E&W) operating routes, as long as they reconcile in total back to our national England & Wales level determination assumptions. Network Rail will be required to agree route-level REBS baselines for CP5 prior to the start of the control period so that train operators have sufficient time to decide on whether to enter into REBS.	We welcome ORR's decision that we will be able to set the REBS baselines for the nine England and Wales operating routes, subject to them reconciling back to the national determination assumptions. At ORR's July 2013 industry workshop on REBS baselines, we provided an overview of the process for establishing the E&W REBS baselines, stating that they will be consistent with the relevant parts (i.e. those that are within the scope of REBS) of our expenditure and income plans, which will be set out in the CP5 Delivery Plan. The REBS baselines will also be published alongside our CP5 Delivery Plan. We are planning to consult on the Delivery Plan in December 2013 (which will include REBS baselines), such that the plan can be finalised by the end of March 2014. In ORR's proposed REBS drafting for track access contracts, on which it has consulted as part of the PR13 implementation consultation, ORR has proposed that operators will be required to make their opt-out decisions by 1 June 2014. We consider that this process will allow a sufficient amount of time for train operators to make their decisions.
19.14	REBS	ORR states that it can see the rationale for allowing certain changes to REBS baselines. It recognises that adjustments may sometimes need to be made to reflect factors such as the re-profiling of a major cost-saving (or income generating) scheme within the control period. But ORR does not agree that Network Rail should be allowed to make annual adjustments to the previous year's REBS baseline. This approach will provide certainty for train operators, while allowing Network Rail and train operators to propose and, after having consulted, refine the route-level income and cost assumptions prior to the start of the control period. ORR propose to hold a workshop on setting the REBS baselines with the industry ahead of final determination.	As stated in ORR's Draft Determination, we have previously argued that we should be allowed to make intra-control period adjustments to the REBS baselines when there is a significant change within the business that could otherwise result in windfall gains / losses to operators participating in the REBS mechanism. We do recognise, however, the importance of certainty to participating operators. While the ability to adjust the REBS baselines is our preferred solution (for the reasons set out in our February 2013 letter to ORR), we accept ORR's proposal, as set out in §19.17, that any significant changes to income and costs within the control period can be reflected in annual adjustments to the level of REBS performance. We consider that this will go some way to mitigate against the potential issue of windfall gains and losses across routes and train operators that could result absent such an approach. It is important to note that this approach does add complexity to Network Rail's annual reporting requirements. For example, we could make a structural change to the business that has an impact on the way in which the relevant route(s) are managed. Under ORR's proposed approach, we will need to continue to report against the REBS baselines as set out in the CP5 Delivery Plan even though we could be managing our business differently. As part of our implementation work, we will develop a robust process to manage this process.

Para.	Topic	ORR Statement	Network Rail's Response
19.16	REBS	ORR states that it wants REBS to be consistent with its wider approach to measuring NR's financial performance which focuses on a comparison between NR's total financial performance and ORR's PR13 determination. ORR states that its approach will be consistent (e.g. aligning performance measure with the RAB roll forward) for the incomes and costs that are included in REBS.	It is important that the measurement of REBS performance is consistent with the general approach to measuring Network Rail's financial performance. For this reason, we are concerned by one of the options that ORR put forward at its July workshop for dealing with the non-delivery of outputs, suggesting that the measurement of REBS performance could exclude any output adjustments that ORR may make to Network Rail's total performance measures. We consider that this is counter to the principle of consistency and, depending on the timing, could also have an adverse financial impact on Network Rail. For example, we could be in a position where ORR determines REBS outperformance, of which we would be required to share 25%, yet a later downwards output adjustment could be made to our total performance, which in our view, would undermine the effectiveness and integrity of REBS. It is also critical that there is consistency between the measurement of renewals efficiency used for total performance and REBS performance. As we stated at the July workshop, we strongly consider that renewals should be included in REBS as we believe that closer working with operators should assist us in achieving further efficiencies in this significant part of our cost base. We acknowledge that the measurement of renewals efficiency is a challenging area, demonstrated by our experience during CP4. One of the key issues is that there is no 'one size fits all' to the measurement of renewals efficiency, especially since some asset categories do not have volume measures or unit costs (information management, for example). A key point is that ORR's annual efficiency assessment, both for total and REBS performance, needs to be concluded in a reasonable timeframe (for example, no later than 90 days after Network Rail submits its Annual Return and Regulatory Financial Statement). These assessments need to be sustainable and not subject to later material variation. We support ORR's proposal to retain consistency with the RAB roll forward policy in CP5 for determining REBS performance for renewals, under which any sharing of REBS outperformance with train operators would be based on the 25% added to the RAB. An issue that requires further consideration, however, is ensuring that the REBS baselines are set on a consistent basis. The renewals element of ORR's indicative REBS baselines published in Annex D of the draft determination is based on full renewals expenditure, which has implications for the overall REBS cap. ORR has proposed that this cap will be set at 10% of each route's REBS baseline. We think that one

Para.	Topic	ORR Statement	Network Rail's Response
			option could be to set the renewals element of each route's REBS baselines at 25% of the full level, such that they are brought into line with the RAB roll forward policy and the cap to REBS out / underperformance sharing is not set too high. We would welcome further discussion with ORR on these important issues before its final determination.
19.17	REBS	REBS baselines will remain fixed for CP5 but with any significant changes to Network Rail's income and costs within the control period reflected in annual adjustments to the level of REBS performance.	See response §19.14, above.
19.19	REBS	The only additional adjustments that ORR will consider making to the measure of REBS performance are where: (a) Network Rail makes a significant change to its spend profile in a particular route, e.g. Network Rail re-profiles the roll-out of its network operating strategy, where these changes could not have been reasonably known before the baselines were set; or (b) Network Rail makes material changes to the methodology for allocating costs between operating routes.	ORR's guidance is helpful in this regard, however, we consider that further clarity will be needed particularly around the treatment of accelerated / deferred renewals (in the context of total financial performance) and the subsequent impact on REBS performance. It will be important to agree a transparent and robust process with ORR and industry for proposing such changes. Further clarity on how ORR will assess whether the changes to annual REBS performance are permitted will also be important.
19.22	REBS	We will include within REBS only those elements of Network Rail's costs and incomes that we consider train operators are able to influence. On this basis, REBS will include the following: (a) support costs; (b) operations costs; (c) maintenance costs; (d) renewals costs; (e) Network Rail's share of RSSB and BTP costs; (f) Schedules 4&8 costs (g) property income; (h) variable usage charge income	We welcome many of ORR's decisions with regards to the scope of REBS, particularly the inclusion of Schedules 4 and 8 costs and variable usage charge income. On further reflection, we think there is a strong case for also including EAUC and capacity charge income in the scope of REBS given that these charges are set to recover the costs associated with accommodating additional traffic and not including them could, in theory, create perverse incentives to not accommodate additional traffic. We have previously argued that property income would be better suited to tailored agreements between operators and Network Rail and maintain this position. As part of our CP5 Delivery Plan development, we are developing our approach to the disaggregation of Schedules 4 and 8 to route-level and will engage with ORR and industry as this work evolves.
19.23-19.27	REBS	Approach to calculation and payment under REBS- retention of annual payments and will be consistent with ORR's assessment of NR's cumulative outperformance of REBS baselines	Figure 19.1 does not include the treatment of any alliance payments and how they interact with the REBS mechanism. Following the publication of its Draft Determination, ORR has provided further clarity on the treatment of alliance payments and their interaction with the REBS mechanism, and that any costs / savings associated with an alliance will be calculated and treated as adjustments to Network Rail's route performance before calculating the amount of out/ underperformance to be shared under REBS ('alliance before REBS'). As highlighted in our response to §19.16, above, it is very important that ORR's annual assessment is concluded within a reasonable timeframe

Para.	Topic	ORR Statement	Network Rail's Response
			and is sustainable.
19.24	REBS	The value of any EBSM payments is currently set out in ORR's annual efficiency and finance assessment of Network Rail. For REBS to provide a real incentive to train operators, ORR believes that it is important that payments are made on an annual basis and proposes to retain this approach in CP5.	We note ORR's proposed decision in this regard. Consistent with our comments above, we consider that a timely and sustainable efficiency assessment by ORR is critical.
19.32-19.37	REBS	In this section, ORR discuses exposing franchised train operators to changes in Network Rail's costs at a periodic review. In paragraph 19.36 it notes that the decision on whether to increase franchised train operator exposure to changes in Network Rail's charges is ultimately for the governments to make.	We agree that this is matter for the governments and note DfT and Transport Scotland's current positions in this regard.
19.45	R & D and innovation	"Network Rail should set out its proposals on matched funding ahead of the final determination and provide its view on how ORR might best develop the regulatory framework to encourage R&D and innovation. In particular, it should demonstrate: (a) whether a matched-funding financial incentive would allow Network Rail to attract third party investment such as venture capital or other forms of financing and if not what modifications would be necessary; " (a) whether a matched-funding financial incentive would allow Network Rail to attract third party investment such as venture capital or other forms of financing and if not what modifications would be necessary; (b) how Network Rail would envisage sharing the rewards or benefits of any investment with others such as its supply chain and any third party funders and what it considers these benefits are likely to be; and (c) how Network Rail would envisage sharing the risks of any investment with others such as its supply chain and whether the scale of these risks can be viewed as a reasonable part of its overall balanced portfolio of risks.	Please refer to the main body of our main response.
19.56	Volume incentive	Getting the transmission mechanism right is a matter for Network Rail (ORR then refers to Network Rail's April 2013 letter and our proposals for transmitting the volume incentive into our decision making processes and our people's individual incentive arrangements). ORR notes Network Rail's intention to consult on its proposals once ORR has concluded on volume incentive policy for CP5.	We agree that the transmission mechanism is a management issue for Network Rail and that we need to put in place appropriate arrangements to drive behaviours 'on the ground'. As ORR notes, our April 2013 letter set out our proposed approach to transmitting the volume incentive into our decision making processes. In particular, we set out that the inclusion of volume incentive payments in our assessment of financial performance will create a direct financial link to route performance and increase the visibility of the incentive to decision makers through colleagues' bonus arrangements. To clarify, our April 2013 letter stated that we would consult on disaggregating the national incentive into route baselines for CP5 (as opposed to the specifics of the transmission mechanism, which as above, we consider is a management issue). We propose to include the disaggregated baselines in the CP5 Delivery Plan, on which we will consult in December 2013.
19.58	Volume incentive	Growth baselines will be disaggregated but we will maintain national incentive rates	Keeping the mechanism simple is important, so we agree with maintaining national incentive rates.
19.60	Volume incentive	We will introduce a downside for CP5, with symmetric incentive rates so that the same rates. Symmetric rates eliminate any uncertainty over which rates might apply to a given increase in volume. The downside should mitigate Network Rail's incentive to reduce volume under pressure from the	In our response to ORR's December 2012 consultation on the volume incentive, we stated that on balance, we would be content to see the introduction of a downside to the regime, as long as our downside exposure was limited to an appropriate level. We stated that there would

Para.	Topic	ORR Statement	Network Rail's Response
		performance regime.	be merit in the design of the downside being symmetric (i.e. upside and downside payment rates being equal) with a downside floor. We support ORR's decision, therefore, in this regard. Given the introduction of a downside, it is absolutely critical that the four volume incentive national baselines are set at a realistic level such and that the level of the floor to the downside does not expose us to undue financial risk and should be set at a manageable level for the business, for example £100m. We discuss these issues in further detail, below.
19.61	Volume incentive	We will introduce both a ceiling and floor on payments under the volume incentive.	We note the rationale for introducing a ceiling on volume incentive payments. Consistent with our response to ORR's December 2012 consultation on the volume incentive, we support the introduction of a floor on volume incentive payments, subject to the floor being set at an appropriate level.
19.62	Volume incentive	We propose to introduce a floor of -£300m and a ceiling of +£300m for Cp5.	We are concerned by the proposed floor of £300m to downside payments under the volume incentive, and the resulting potential adjustment to our revenue requirement in CP6 through the opex memorandum account. As the incentive is not linked to costs, if we were to reach the downside floor of £300m by the end of CP5, we would not be able to take corresponding costs out of the business in CP6. We are concerned, therefore, by the financial risk to which this would expose us (on top of any efficiency challenge set by ORR in PR18) in CP6 and that the floor should be set at a much more manageable level for the business, for example £100m. We would welcome further discussion with ORR on this before its final determination.
19.63	Volume incentive	The baseline will reflect expected growth, and it is our intention currently that this is based on NR's traffic model and DfT farebox projections…A baseline set below expected growth might require a corresponding adjustment to ftac for a positive expected value of the volume incentive.	Setting the baselines at a realistic level is critical, and in so doing should give an expected payment value of zero under the incentive. On this basis, adjustments to FTAC would not be necessary. We have been working closely with ORR on the approach to setting realistic volume incentive growth baselines, which is discussed further in our response to § 19.73, below.
19.68	Volume incentive	We propose to continue to include all growth regardless of who has driven that growth…we propose to exclude commodities that are subject to mark-ups	We strongly disagree that the basis on which to exclude commodities from the freight growth baselines should be driven by the exclusion of commodities that are subject to mark ups. The implication of this approach is that the treatment of ESI coal and biomass would be inconsistent and we do not consider that this is appropriate, given that biomass is a close substitute for ESI coal. As ORR concludes in Annex B to its Draft Determination, its decision not to subject biomass to mark-ups is on the basis that there is a considerable amount of uncertainty regarding the biomass market, and that ORR's expert advisors concluded that the imposition of such charges could risk large projects not going ahead. This decision appears to be

Para.	Topic	ORR Statement	Network Rail's Response
			based, therefore, on wider policy considerations as opposed to not meeting the relevant legal and economic criteria for applying mark-ups to particular commodities. We strongly consider, therefore, that ORR's rationale for including biomass in the volume incentive on the basis that it is not subject to mark-ups is flawed. Its treatment should be consistent with ESI coal (since it is a close substitute) and, on this basis, should be excluded from the volume incentive. Furthermore, we consider that an important factor in determining whether commodities should be included in the volume incentive is the extent to which Network Rail is able to influence traffic growth. In relation to biomass, we consider that our ability to influence future growth is limited, on the basis that growth is heavily contingent on the future investment decisions of power stations to convert to biomass and that there is an important interaction of these investment decisions with the level of government subsidy to promote the use of biomass. Clearly these are factors beyond Network Rail's control and will have an important impact on our ability to grow biomass traffic. In the event that ORR does decide that biomass should be included in the volume incentive as part of its PR13 Final Determination, it will be very important that the uncertainty around future growth is factored into the national freight volume incentive baselines.
19.70	Volume incentive	We propose to continue with all four existing metrics… we will allow for the re-opening of the farebox baseline in control period if it is clear that it will be affected by a change in fares policy, and we are confident that we can isolate that effect	Fares policy has had a major impact on Network Rail's performance against the farebox baseline in CP4. Based on this experience, therefore, we consider that there could be merit in ORR allowing a re-opening of the farebox baseline. However, further clarity from ORR on the re-opening process (in the context of the volume incentive baselines) is important, particularly in relation to how it would work and whether it would be symmetric.
19.71	Volume incentive	We will specify an expected national growth baselines for each metric in our final determination.	We have, and will continue to, support ORR in the development of the national baselines that will be included in the PR13 Final Determination.
19.72	Volume incentive	We will work closely with Network Rail to ensure that the baselines are as accurate as possible. It is important that they continue to reflect expected growth and not 'softened' to mitigate the risk of the downside- which is dealt with through the imposition of a floor on the downside payment	As discussed, above, over recent months we have engaged considerably with ORR on our approach to setting passenger and freight traffic growth baselines for the volume incentive. We agree that the baselines should not be 'softened' but it is critical that they are realistic. We discuss what this means in our response § 19.73, below.
19.73	Volume incentive	ORR includes a table of draft national baseline growth rates based on an extract from NR's traffic forecasting model in the SBP which is expressed as average annual growth over CP5. ORR goes on to state that "As well as considering the timing and effect of capacity improving enhancements, we will need to update these draft baselines to reflect expected freight volume growth	We welcome ORR's statement in this regard. As it infers, we have updated our traffic forecasting model since the SBP, and the outputs of this updated model will be used to inform our CP5 Delivery Plan. We have already stressed the importance of setting realistic baselines in

Para.	Topic	ORR Statement	Network Rail's Response
		forecasts in the Freight Market Study"	this response. We consider that there are two key aspects to consider, which we discuss in detail, below: o Use of the most up-to-date traffic forecasts; and o Adjustments for asymmetric risks (which is linked to ORR's statement to consider the timing and effect of capacity improving enhancements). These aspects are also discussed in the supporting document "CP5 traffic forecast and the volume incentive baseline". *Use of the most up-to-date traffic forecasts* The updated passenger traffic forecasts are based on the same methodology as the SBP and are broadly similar, with the exception of a few schemes where a more detailed service specification is now available than at the time of preparing the SBP forecasts. The SBP freight traffic forecasts were based on the Strategic Freight Network (SFN) forecasts. The SFN forecasts were the best forecasts available at the time, however, they were developed before the recession on a 2006 base year, and significant adjustments had to be made to them for the SBP. The updated freight traffic forecasts that will be used in the CP5 Delivery Plan are based on the Draft for Consultation of the Freight Market Study (FMS), recently published by Network Rail. The other key changes, compared with the SBP, include revisions to the phasing of containers' growth and changes to reflect the latest view on economic recovery. *Adjustments for asymmetric risks* In relation to the passenger traffic forecasts for CP5, the service specifications generally assume that additional traffic begins operation at the first timetable change date after the enhancements are completed. However, the additional traffic is dependent not only on the completion of enhancement schemes, but also on rolling stock procurement, and on agreements between funders and TOCs (whether via re-franchising, direct awards / franchise extensions, or negotiations with existing franchisees). In some cases traffic is also dependent on the external delivery of enhancements (e.g. Crossrail); or on enhancements that were proposed in the SBP but which are not funded in the Draft Determination, and which will only proceed if alternative sources of funding are found. The risk around the traffic forecasts is therefore not symmetrical.

Para.	Topic	ORR Statement	Network Rail's Response
			Additional services cannot start until the infrastructure is ready, so there is little chance of significant enhancement-related growth earlier than currently assumed. However, there is a significant chance that growth will come later, because of the risks noted above. In order to set realistic national volume incentive baselines for passenger traffic, the above risks should be taken into account. To inform our discussions with ORR, we have designed a model to assess the risk that passenger traffic growth is delayed due to uncontrollable factors, which assumes a probability distribution for the actual timing of enhancement-related growth and unfunded enhancements. While subject to further discussion with ORR, the outcome of our modelling suggests that the enhancement-related aspects of the passenger growth traffic forecasts (used for the CP5 Delivery Plan) should, on average, be adjusted by -12% over the course of CP5, for the purpose of setting the passenger traffic growth volume incentive baseline. We would expect the outputs from this modelling to also inform the setting of the passenger farebox growth baseline, and look forward to further discussing this with ORR ahead of its final determination. Risks to freight traffic forecasts There is significant risk around any freight traffic forecasting. Freight traffic can change more quickly than passenger traffic and this is clearly evidenced by historic volatility of freight traffic figures. While we acknowledge that, at the current time, there is not industry consensus on the appropriateness of the FMS central forecast, we have no strong reason to believe that the risks around the tonne-mile forecasts are particularly in one direction or another (with the exception of biomass which faces a very uncertain short-term future which is discussed in our response to §19.68, above). We have proposed to ORR, therefore, that the freight traffic forecasts used in the CP5 Delivery Plan should be used to set the national freight baselines for the volume incentive (on the basis that biomass is excluded). These will be strongly influenced by this. However, we have also developed our risk modelling to understand how variations in the underlying freight traffic growth rates affect the CP5 forecasts.
19.74	Volume incentive	We will work with Network Rail to translate expected national growth forecasts into annual route-level baselines ahead of CP5. ORR understands that NR intends to consult on route level baselines in the Dec delivery plan consultation. We will agree the principles for disaggregation with Network Rail in advance of its delivery plan consultation and review the proposed route-level baselines before these are put in place for the beginning of CP5.	As discussed above, we have been working closely with ORR, and will continue to, on developing the national baselines which will be published in ORR's final determination. We strongly consider that disaggregating the baselines to the route-level is a key aspect of the transmission mechanism, which as ORR highlights, is a management issue for Network Rail. We will include the disaggregated volume incentive baselines in our CP5 Delivery Plan. Ahead of the publication of the

Para.	Topic	ORR Statement	Network Rail's Response
			Delivery Plan, we will discuss the principles for our approach to disaggregating the four volume incentive baselines with ORR.
19.77	Volume incentive	We have considered whether the incentive rates should be revisited in light of ORR's decision not to change capacity charge rates. However our decision on incentive rates and payment caps reflects a balance between strengthening the incentive and considering affordability concerns for governments and NR. An increase in incentive rates without a corresponding change in payment caps would significantly increase the risk of the incentive becoming inactive, whereas an increase in caps would increase affordability concerns.	Please see the main body of our response which sets out the agreed proposal on the capacity charge in CP5.
19.80	Volume incentive	We would welcome views on our detailed approach to the volume incentive in CP5 as set out in paragraphs 19.46-19.79 above. We would particularly welcome views on our proposed approach to working with Network Rail to set expected route-level growth baselines and to mitigating risk to Network Rail and governments by setting a national ceiling and floor on payments under the volume incentive of +/-£300m over the whole of CP5.	We consider that we have addressed the points raised in the draft determination in the responses above. Should ORR want further clarification on any area of this response, however, we would welcome further discussion.
19.90	Financial incentives	We see REBS as a stepping stone to the development of more commercial relationships within the industry. As our preference is for more commercial relationships, we would be content to see train operators opting out of REBS to pursue their own commercially negotiated risk and reward sharing agreements with Network Rail, provided such agreements were transparent and non-discriminatory.	As we have noted in previous PR13 submissions on incentives, we consider that alliancing will provide the most effective means of incentivising operators to help increase industry efficiency, although we recognise that REBS will help ensure 'broad-brush' coverage of sharing arrangements and we support its introduction.

Chapter 20: Possessions and Performance Regimes

Para.	Topic	ORR Statement	Network Rail's Response
20.39	Schedule 4 & 8	In particular ORR are improving the compensation and incentive properties of Schedules 4 and 8 to improve outcomes for passengers, end-users and taxpayers. ORR are doing this by: (a) updating Schedule 4 and 8 payment rates so they reflect the best available evidence of the impact of possessions and poor performance on long term revenue and costs; (b) updating performance benchmarks in the Schedule 8 regime, including ensuring Network Rail's performance benchmarks reflect the output targets we set for CP5; and (c) improving other aspects of Schedules 4 and 8 to make sure they function effectively, do not result in perverse incentives, and work overall in the best interests of passengers, freight customers and taxpayers.	As set out in the main document, we are not convinced by the evidence to increase payment rates, and consider that this could have adverse impacts in terms of risk and incentives. We do not consider that sufficient work has been undertaken to understand the possible impacts of ORR's proposals.
20.45	Schedule 4 & 8	ORR have decided to set Schedule 4 and 8 payment rates so that they continue to compensate train operators for the full financial impact of service disruption due to Network Rail and other operators.	We support the principle that Schedule 8 (and 4) rates should continue to be set so that they reflect the full impact of performance on TOC revenue. However, as noted in the main body of our response, we do not believe that the evidence that ORR proposes to use as the basis for the increased rates is sufficiently robust or that the possible impacts have been sufficiently well understood.
20.53	Schedule 4 & 8	ORR are updating the Network Rail benchmarks to take account of: (a) actual performance between the beginning of April 2010 and the end of March 2012 (the recalibration period); (b) committed performance by Network Rail to train operators between the end of the above period and 1st April 2014, contained in the Join Performance Improvement Plans (JPIP)s; and (c) performance trajectories for CP5. These are to ensure the CP5 benchmarks reflect a level of performance which Network Rail can deliver in respect of each train operator, while at the same meeting the performance targets we have set at an aggregate level.	Updating Schedule 8 benchmarks is a key activity for PR13. The industry has undertaken a large amount of work to improve the way that benchmarks will be set for CP5 compared to earlier control periods. We consider that this will help ensure that benchmarks are more robust in CP5 than they appear to have been in CP4, as we have explained in the main body of our response.
20.63	Schedule 4 & 8	On the basis of the process followed and our involvement in it, ORR's opinion is that the updated PDFH parameters are more robust than the previous ones. To ensure Schedule 8 is based on the best and most up to date available evidence, except where ORR have a clear rationale for doing otherwise, ORR will calculate the final CP5 Schedule 8 payment rates so they are based on the GJT elasticities and late time multipliers that feature in the updated edition of the PDFH.	As set out in the main body of our response, we do not consider that the evidence is sufficiently robust to increase payment rates and do not consider that possible consequences have been sufficiently well evidenced.
20.69	Schedule 4 & 8	Network Rail is currently reviewing responses to its consultation. ORR will make a final judgement on the methodology to be used and reflect this in our calculation of final Schedule 8 payment rates.	We are concerned about the level of rigour applied by ORR in making its decision on an adjustment to Schedule 8 payment rates for LSE commuting flows. It would be helpful if ORR could describe its decision – and the reason for the 10% in particular – in further detail, citing the evidence behind its proposal.
20.70	Schedule 4 & 8	There are some other issues ORR consulted on in November 2012 in relation to which ORR will not be making changes. These are as follows: (a) whether to introduce a time delay on Schedule 8 payments. (b) whether paragraph 17 of Schedule 8 should be amended to reduce the number of circumstances in which train operators may request changes in payment rates. (c) treatment of cancellations by train operators to their own trains.	We support this.

Para.	Topic	ORR Statement	Network Rail's Response
20.72	Schedule 4 & 8	We have also given Network Rail and train operators the opportunity to agree alternative Network Rail payment rates in instances where they are both of the view that the default methodology is likely to result in Schedule 8 payment rates that are not a realistic reflection of the impact of performance on revenue for a particular service group. Any such proposals should be submitted to us by 17 July 2013 and will be subject to our approval. Our final date for approving local revisions to Schedule 8 payment rates will be 7 August 2013. At this point all the Schedule 8 Network Rail payment rates will be final.	We support this. We note that a number of operators and routes have agreed 'bespoke' arrangements, particularly for LSE commuting flows. We consider that this demonstrates the lack of consensus around ORR's proposals, and highlights the risks that could be imported if payment rates are increased to the level being suggested by ORR.
20.83	Additional compensation for sustained poor performance	ORR have decided to continue to set the SPP threshold at 10% of the Schedule 8 benchmark for CP5, on the basis that the small number of claims made in CP4 does not indicate that in practice an SPP threshold of 10% is undermining the liquidated sums nature of Schedule 8. Given the legal and administrative costs to a train operator of making a claim, we anticipate that SPP claims are in general only made when losses incurred are materially greater than the formulaic Schedule 8 compensation received.	We strongly disagree with ORR's change of position compared to its consultation on Schedules 4 and 8 in November 2012. As set out in the main body of our response, we believe that the arguments put forward by ORR for its change of position are weak. We are concerned that reasonable process has not been followed in arriving at this new position, and that sufficient opportunities for debate have not been provided.
20.90	Other issues	On the basis of information provided by Network Rail, ORR have calculated the draft CP5 Schedule 8 Network Rail benchmark to be 6.91 minutes of delay per 100 freight operator miles. ORR will be discussing the detail of this calculation further with industry through the freight Schedules 4 and 8 industry group, and will also be reviewing the data Network Rail has provided to ensure its accuracy.	We support this, and believe that it is important that Schedule 8 benchmarks are based on accurate data and calculations.
20.97	NR freight benchmark	Opportunity for operators to agree to a bespoke arrangement, approved by ORR, if they wish.	We support this, but fully recognise the need to ensure that third parties are protected.
20.104	NR freight benchmark	Network Rail cancellation payments compensate freight operators for the financial impact of each freight train cancellation attributable to Network Rail. If cancellations exceed a threshold representing the historic normal number of cancellations, a higher cancellation payment applies. ORR will continue to set this cancellation threshold at 0.41% of services scheduled. Unlike the Network Rail payment rate, cancellation payments are not part of the benchmarked regime. In CP4, Network Rail was funded for this part of the regime and it will continue to be funded for this aspect in CP5.	We welcome this, and believe that the approach has worked well in CP4.
20.107	NR freight benchmark	As with the Network Rail benchmark ORR have set the freight operator benchmark at a challenging but realistically achievable level. ORR's calculation of the draft freight operator benchmark is 2.37 minutes of delay per 100 freight operator miles for the beginning of CP5. This is based on actual delay caused by freight operators to third parties during a two year recalibration period from the beginning of April 2010 to the end of March 2012, adjusted for traffic growth379. The recalibration period is consistent with that used to update passenger train operator benchmarks.	We welcome this. We believe that this approach provides a balanced package, which ensures that all parties are appropriately incentivised to improve performance, whilst not imposing undue financial requirements on the taxpayer.
20.115	NR freight benchmark	(a) updating the congestion factor to reflect work carried out by Arup on the actual impact of traffic growth on delay minutes caused by freight operators to third parties, as part of the update of the capacity charge. The industry has been given the opportunity to comment on Arup's work through the industry group. Arup's recommendation for the congestion factor is 1.044. The calculation of this relies to a large extent on the work Arup has done as part of Network Rail's work to recalibrate the capacity charge. ORR will review this between now and the final determination, so the congestion factor of 1.044 and, as a result, ORR's calculation of the freight operator benchmark, should be considered as draft; and	We strongly support this. It is important that the congestion factor is based on objective evidence. We note that this proposal will bring the Freight Schedule 8 regime into line with the capacity charge regime for the first time.
20.117	NR freight benchmark	The draft CP5 freight operator payment rate for CP5 is £51.98 (in 2012-13 prices) per minute of delay to third party trains which is attributable to the freight operator.	We support the calculation, but are not convinced by the evidence to TOC payment rates which are pushing the results up.
20.122	NR freight benchmark	In CP5, bonus payment rates will be set so they are equal to compensation payment rates.	We strongly support this and believe that this will better incentivise the right behaviour in terms of performance management in CP5.
20.132	NR freight	For small freight operators and new entrants, we will continue to set a default reciprocal annual liability	We welcome the definition of a small FOC.

Para.	Topic	ORR Statement	Network Rail's Response
	benchmark	cap, at the same level as ORR set for CP4, but uplifted for inflation. ORR consider a small freight operator to be any operator with less than 5% market share of total freight train miles run, in a given year.	
20.135	NR freight benchmark	Charter operators are currently subject to different performance arrangements compared to other passenger operators. For CP5 ORR plan to introduce benchmarks into the Schedule 8 for charter operators to ensure financial neutrality of the Schedule 8 regime, and bring it in line with the Schedule 8 used by other types of operator. ORR will also be increasing the charter operator payment rate to reflect the increase in Schedule 8 payment rates for franchise and open access passenger operators.	Further work will be needed to consider how such a process could be administered.
20.144	NR freight benchmark	Using improved methodology, Network Rail has calculated a draft charter operator payment rate of £69.31 per minute of delay. This CP5 rate is almost double the CP4 charter operator payment rate that was set equal to the Schedule 8 freight payment rate. The increase has been driven by the increase in draft Schedule 8 payment rates for passenger operators. The new rate better reflects the actual impact of delays caused by charter operators to other train operators. ORR recognise the potential impact this increase in the charter operator payment rate would have if they were to continue with the charter operator Schedule 8 without benchmarks. Hence, for CP5, ORR plan to introduce benchmarks into the charter operator Schedule 8.	We support this, subject to earlier comments on increased TOC payment rates.
20.156	NR freight benchmark	For CP5, Network Rail has improved its methodology for calculating the ACS by forecasting planned activity volumes at route, rather than national level. This will help to bring Schedule 4 costs closer to the actual level of possessions faced by franchised passenger operators in each area. The ACS will continue to be apportioned pro-rata amongst franchised passenger operators based on historic Schedule 4 compensation payments paid to operators.	We support this.
20.179	NR freight benchmark	We are aware that there is sometimes a misperception that the cause of Network Rail to book possessions too far in advance is principally due to the notification discount factors and thresholds within Schedule 4, in particular where the maximum discount threshold is set. Possessions are often planned long before the first notification discount threshold, which is set at publication of the new working timetable. It is our view that it is Network Rail's timetable and engineering planning process and in particular the timescales for completing the Engineering Access Statement that is the primary driver of some possessions being booked very far in advance. We consider changes to the timetable planning process would be more effective in addressing this problem than a change to the first notification discount threshold within Schedule 4. Changes to the timetable planning process are dealt with under the Network Code and as such not part of this periodic review.	We agree that there are misunderstandings across the industry about the causes of sub-optimal allocation between infrastructure management and train operation, and the industry is focusing on getting a proper understanding of root causes of sub-optimal allocation. We agree that Schedule 4 does not incentivise Network Rail to book possessions too far in advance. We believe that this issue relates to a broader question of best-value, whole industry allocation of access to the network, balancing infrastructure management and train operation. We are developing a joint approach to this issue with partners across the industry as part of the RDG's Asset, Programme and Supply Chain Management (APSCM) work-stream. The ASPCM work-stream is leading improvement opportunities by agreeing joint priorities across the industry. This is likely to encompass regulatory, process and behavioural opportunities for improvement. On 8 August 2013 we hosted a small sub-group of the APSCM to: review the broader 'planning', 'access' and 'possession' scope; develop cross-industry desired outcomes; and align existing and future improvement initiatives to most effectively deliver those outcomes. We are currently progressing the actions from this workshop. This work is captured under Network Rail's strategic theme of Capacity and Performance Management. A number of existing initiatives are being aligned to this theme, with internal governance in place to make them 'joined up'.

Para.	Topic	ORR Statement	Network Rail's Response
			One major initiative under the Capacity and Performance strategic theme is our APSCM-supported Industry Access Programme (IAP). IAP is currently focusing on developing a better, whole-industry approach to both regular maintenance and restriction of use access. It will do this by applying the principles of cross-industry working. Phase 2 of IAP will be scoped between September and December 2013, using input from the APSCM. It is likely to focus on improvements to access planning and timetable planning. Without prejudicing the cross-industry priorities, Part D of the Network Code as well as internal process improvements to timetable planning are strong candidates for improvement in Phase 2. The APSCM meeting on 5 September 2013 will review the proposals from the 8 August 2013 workshop and give a clear steer for the next phase of improvements.
20.182	NR freight benchmark	ORR plan to increase the protection provided by paragraph 2.9 of Schedule 4 to enable the recovery of direct costs related to amended or cancelled Type 1 possessions, for cancelled possessions where the resulting costs incurred are £5,000 or more. ORR's view overall is that a liquidated damages regime is not justified in this instance given the likely number of claims, and complexity in developing it in such a way that it would appropriately compensate train operators. However, when ORR conclude on this in their final determination, they will take into account the proposal Network Rail outlines in its letter and responses it receives from stakeholders.	We agree with the proposal to increase the protection provided by paragraph 2.9 of Schedule 4 to Type 1 possessions. However, we would require an increased ACS for the increased scope of Schedule 4 compensation. We believe that an additional £1m per annum across all operators would be required. This figure has been calculated using a formula based on the current calculation of Schedule 4 EBM compensation and the number of re-instated trains per year. The split between operators has been done on the basis of the ACS share excluding payments for cancelled Type 1 possessions. (See our supporting document, *"Calculating the additional Access Charge Supplement required for provision and compensation for cancelled Type 1 Possessions"* for further detail.)
20.195	Freight possessions regime (footnote 394)	Network Rail has subsequently informed us that it did not include funding for service variations payments compensated under Schedule 4. It now estimates that it will require funding of around £612,000 (2012-13) prices. We will consider this for our final determination.	We consider that compensation for service variations under the freight Schedule 4 regime should be funded, and therefore captured in Network Rail's funding requirement for CP5. We are pleased that ORR has acknowledged this in its Draft Determination. Network Rail has considered the scale of the funding required and, based on 2012/13 data, we estimate that this should be in the region of £612,000 per year. We continue to work with ORR colleagues on this matter.

Appendix 2

This explains where we have responded to ORR’s specific questions

ORR's specific consultation questions

ORR included some specific consultation questions in its Draft Determination. The table below indicates where our response to these questions is included in our overall response.

ORR Statement - Annex A: Specific consultation questions	Where we have responded
The proposed approach to the volume incentive in CP5 (as set out in paragraphs 19.46 – 19.79 above), including the approach to setting growth baselines and a ceiling and floor on payments;	Appendix 1 – chapter 19 response to paragraphs 19.56-19.80
Proposals for certain aspects of the route-level efficiency benefit sharing (REBS) mechanism (as set out in paragraphs 19.10 – 19.22), comprising: our proposed approach to setting REBS baselines; the method for calculating and reporting REBS in CP5; which parts of Network Rail's income and costs should be included in REBS;	Appendix 1 – chapter 19 response to paragraphs 19.13-19.37
Whether the alternative proposal on the capacity charge for freight operators proposed by the Rail Freight Operators' Association should be adopted as a substitute to retaining the existing capacity charge in CP5 (see paragraphs 16.110 – 16.116). We also seek views on: whether this mechanism should be adopted only for freight operators or whether it should also be adopted for passenger open access and/or franchised passenger operators; what the implications of its adoption for these operators would be;	Summary page 9 Main body pages 42-43
Whether, for Network Rail to retain the benefit of an efficient renewals underspend, it should need to show that it has successfully implemented a package of improvements on asset management and improved its reporting systems (see paragraph 12.101 in the financial framework chapter);	Summary page 7 Main body pages 25-27
Whether a value based methodology for adjusting for the non-delivery of outputs would be appropriate (see paragraph 12.107 in the financial framework chapter);	Summary page 7 Main body page 26
In order to improve transparency and provide better incentives on Network Rail without overly complicating the financial framework, we are proposing to remove the 'internal/Network Rail' investment framework and use an amended version of the RAB roll forward process to improve the incentives on Network Rail, as discussed in paragraphs 12.136 – 12.147;	Summary page 7 Main body pages 30-31
Network Rail's cost of capital for CP5 and in particular the pre-tax cost of capital that will be used for investment framework schemes, as discussed in the impact of financial framework on financial parameters chapter (chapter 13);	Appendix 1 – chapter 13 response to paragraph 13.80
The approach to financial monitoring in CP5, as discussed in the monitoring, enforcement and reporting chapter (chapter 23).	Summary page 7 Main body pages 25-28