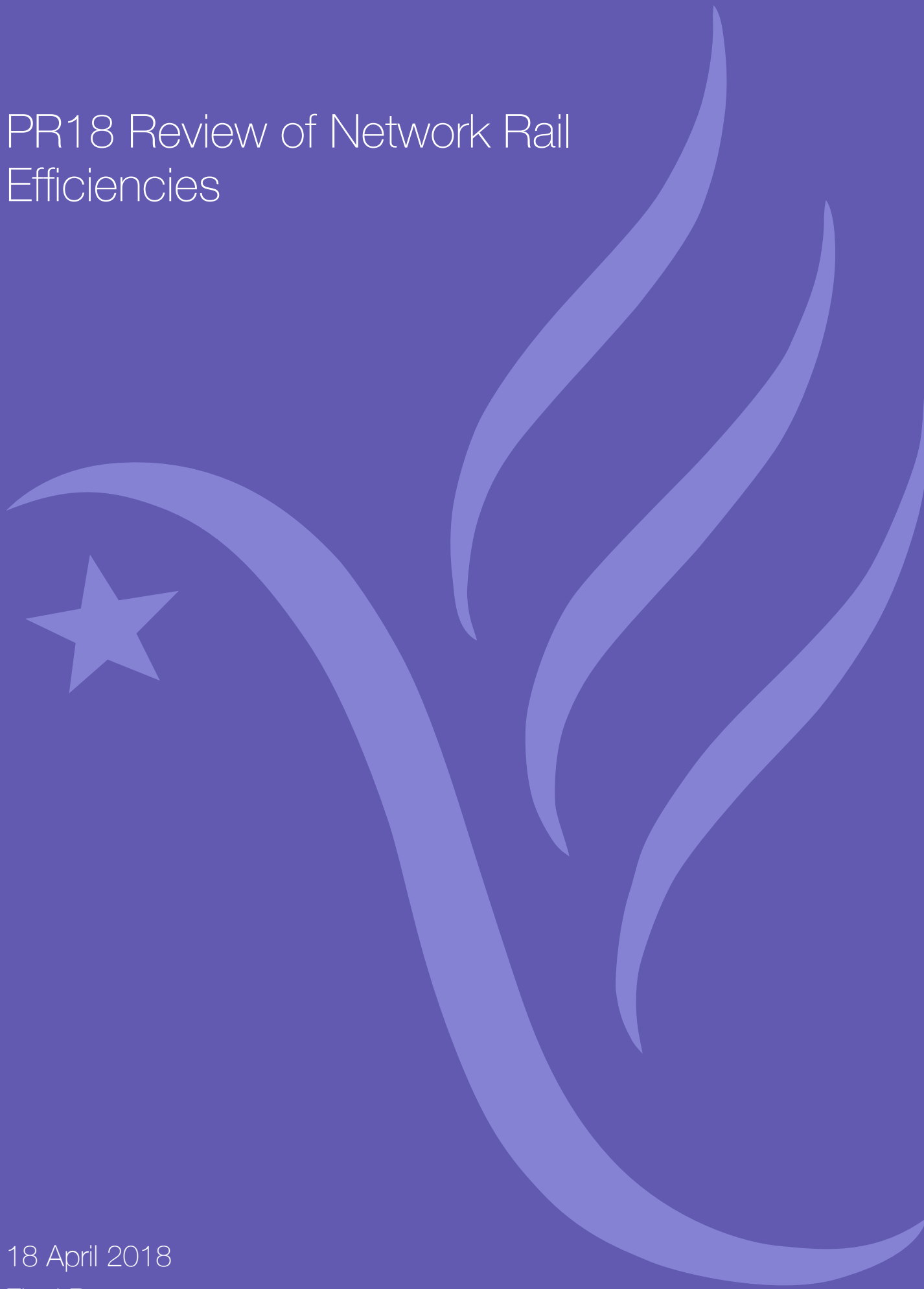
PR18 Review of Network Rail Efficiencies



18 April 2018

Final Report

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Executive Summary

Background

In Periodic Review 2018 (PR18) ORR will determine what Network Rail must deliver in Control Period 6 (CP6), the funding it requires for this, and the incentives needed to encourage effective performance and delivery. A key part of the PR18 process is to review Network Rail's plans, as set out in its Strategic Business Plan (SBP), to determine whether it has a robust and comprehensive approach to identifying and delivering efficiencies that are reflected in the Route Strategic Plans.

The purpose of this report is to provide assurance to ORR as to the reasonableness of the efficiency and headwind elements of the Route Strategic Plans, and the framework they have been produced within. The outcome of this review will be used to inform more specific risk-based and quantified analysis by ORR during the Periodic Review.

Figure 1 below illustrates the structure of costs presented in the Route Strategic Plans and sets the context for the efficiency (component F) and headwind (component E) elements, which are the subject of this report.

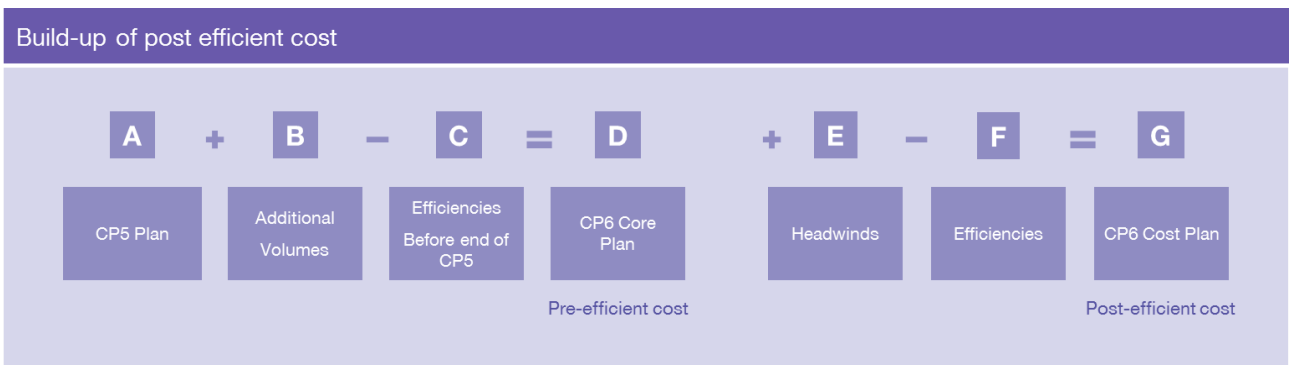

Figure 1: Structure of the presentation of Route costs, including the headwinds (E) and efficiencies (F) elements

This report has been prepared by Nichols as an Independent Reporter (IR) in response to Independent Reporter Mandate "PR18 – Review of Network Rail efficiencies" received on 23 January 2018 (see Appendix 5) and in accordance with the Nichols proposal (version 2) dated 30 January 2018.

Our meetings with the Routes

We held a meeting with each of the eight Routes to review their CP6 headwinds and efficiencies plans. The respective Route Financial Director (FD) was in attendance at all 8 meetings and the Director of Route Safety and Asset Management (DRSAM) at 6 of the 8 meetings. The Route Asset Systems Integration Manager deputised for the DRSAM at two meetings. Attendance of these senior level staff was important to the review as they are some of the key individuals involved in the preparation and ownership of the efficiencies in the CP6 Route plans.

It was apparent from our meetings that a great deal of time has been spent over many months in developing the efficiencies element of the Route Strategic Plans (RSP), including engagement with other Routes and support functions. This has resulted in very strong ownership of the efficiencies plans by the Route teams.

Conclusions

The mandate asked that the Independent Reporter answer four key questions after considering seven factors. The main body of this report contains the IR's findings against the seven considerations from which the answers to the four questions were derived. Appendix 2 contains the details of our meetings with the routes and Appendix 4 contains the documentation provided by the routes as evidence.

Question 1: Is the efficiency and headwind framework in which the routes have been asked to operate within a reasonable framework?

Yes, the efficiency and headwind framework is entirely logical albeit it is complex for the routes to fully comply with rigorously and consistently. Both the interpretation of headwinds and the demonstration of the cost movement between CP5 exit and the pre-efficient CP6 Core Plan are both complex parts of the framework.

Question 2: Has each Route followed a reasonable process within the framework?

Yes, with the exception of Anglia who have derived their core CP6 plan and post efficient cost by a different method. The framework has allowed the routes to develop and own their efficiency plans and the behaviours we observed were appropriate to the now devolved Route structure.

Question 3: Are the plans produced by each Route a reasonable outcome of the process undertaken?

There are well-structured plans for the efficiencies. However, there is a degree of uncertainty in the quantum of both the estimated efficiencies and the base CP6 core pre-efficient costs. This uncertainty arises from a combination of: a potential overlap of efficiencies with core costs and/or headwinds and a large number of assumptions being made about the plan for CP6 where development is currently immature.

The plans for headwinds include items which we consider should not be categorised as headwinds as we believe there should already be allowances made for them elsewhere in the budget. This also creates the potential for an overlap/double counting of costs in the SBP. There is no evidence of mitigation/factoring down of headwinds cost estimates.

Question 4: Have any factors been identified that merit further consideration, that might materially impact the route headwinds/efficiencies plans?

We have identified the following factors that merit further consideration:

1. Provision for uncertainty in efficiencies estimates

The estimates for the efficiency initiatives have been factored down to reflect deliverability and other risk factors. On a standalone basis this would be reasonable; however there are multiple places within the build up to a post efficient cost that contains risk provisions. For example, the core CP6 plan implicitly includes a risk allowance as it is based on outturn performance and then there is also a Group Portfolio Contingency Fund envisaged to provide a high confidence in deliverability of the CP6 plan. Our concern is that there appears to be several places containing uncertainty provisions across the post efficient cost build up and raises a question whether the specific factoring down of efficiency estimates is appropriate.

2. Consistency of the CP6 core plan as a baseline for efficiencies and headwinds

It is important that headwinds and efficiencies are applied to a consistent set of core route CP6 plans i.e. pre-efficient costs that have been prepared on a consistent basis. Otherwise the comparison of the percentage efficiencies planned by each route would be undermined and would not be meaningful. The BRT 'fishbone' presents a consistent method by which the post-efficient cost should be built up from a known CP5 outturn performance.

We became concerned that there was no transparent evidence that the routes had consistently followed the 'fishbone' structure to demonstrate the movement between current CP5 costs and the pre-efficient CP6 costs. When queried the routes put apparent changes in the high-level unit rates down to changes in the underlying work type mix; whereby constituent work types have different unit rates. To verify this we undertook an analysis of Unit rates at lower level work types. We compared unit rates implicit in the CP5 outturn costs with CP6 unit rates derived from the CP6 core plan (pre-efficient) estimates. This analysis shows a wide variation in the differences between CP5 effective unit rates and the derived CP6 planned unit rates. This implies that judgements have been made by the routes to change the effective unit rates between CP5 and CP6 without a transparent explanation. We believe that the translation of CP5 exit rates into CP6 pre-efficient rates for Core Plan should be consistent and transparent as the 'fishbone' intends.

A specific consideration is the method by which Anglia route has derived its pre and post efficient costs.

3. Headwinds cost estimates are not justified

We have a number of concerns regarding the use of Headwinds which taken together inform our view that the headwinds cost estimates are not justified. Our first concern is the interpretation of what is a genuine headwind as opposed to something that is either a known risk or should be accounted for in the core CP6 plan. Given our last point about the lack of transparency in unit rate changes for the core CP6 plan, it is not possible to establish if these headwinds are already accounted for in the core.

Secondly, there is no evidence of the headwinds cost estimates being factored down by the Routes for uncertainty and to account for sensible mitigating actions that could reduce the impact of a genuine headwind. The overall impression is that headwinds have been interpreted as a provision by the routes.

To illustrate these points we have suggested in the main body of this report a re-categorisation of the types of headwinds presented in the route plans.

4. Measuring success of efficiencies and providing incentives for the routes

The efficiency initiatives are at an early stage and it will be several years before enabling actions will be completed and the efficiencies will start to be realised; which is reflected in the profiling of efficiencies. Also, a number of the efficiency benefits are complex and do not trace directly to a financial cost saving. This means that there must be other transparent incentives other than cost savings for the routes to continue their efforts during the Control Period to enable the efficiency benefits. We recommend that a measure that incorporates achievement of work volumes planned is used alongside cost as an efficiency measure for both Capex and Opex. This could be effective unit rates at the right level to avoid work type mix changes obscuring unit rates at a blended level e.g. track unit rate for plain line is too high level. Some of the routes suggested that the Financial Performance Measure (FPM) currently reported to ORR could possibly be extended to provide appropriate metrics.

5. Annualised cost forecasts

We met with DfT who were interested to what extent that the constraint associated with having annualised cost targets for each separate year of the Control Period has been taken account of in the development of the SBP cost plans. The general feedback from the routes is that they were aware of the possible introduction of this constraint but was not a factor they had explicitly accounted for in the plans.

Background

Methodology

A tri-partite (ORR/Network Rail/Nichols) planning meeting was held on 29 January 2018 at which timings of the review were agreed that both supported the PR18 determination timeline and acknowledged the availability of assured Route Strategic Plans. At that same meeting the Nichols three-step approach was reaffirmed as:

- A review of the Framework provided by the Business Review Team and the Asset Working Groups in preparation for meetings with the routes.
- A meeting with each of the 8 routes, attendance to include the Route FD and DRSAM.
- Analysis and reporting, including comparison between routes.

The mandate requests that the Independent Reporter shall provide answers to the four questions below:

- Is the efficiency and headwind framework in which the Routes have been asked to operate within a reasonable approach?
- Has each Route followed a reasonable process within the framework?
- Are the plans produced by each Route a reasonable outcome of the process undertaken?
- Have any factors been identified that merit further consideration, that might materially impact the route headwinds/efficiencies plans?

In developing its opinion the Independent Reporter is requested to consider the following:

- The rationale and rigour of challenge for efficiencies that were:
  - Identified for inclusion within the plan
  - Identified but not included within the plan
- The rationale and rigour of challenge for headwinds that were:
  - Identified for inclusion within the plan
  - Identified but not included within the plan
- Sharing of initiatives and good practice between Routes
- The level of financial risk associated with each Route's approach
- The deliverability challenge of achieving any efficiencies included within the plan
- The application of any central guidance issued
- The role of central functions, such as STE, in the delivery of the Route's efficiency plans

This report has therefore been structured, where appropriate, around these four questions and seven considerations.

Scope

This review considers the Headwinds and Efficiencies in the 8 Route Plans and not those in the Route Support Plans. The Route Services Plans are considered only for their inputs to the 8 Route efficiencies plans.

This review is focussed on headwinds and efficiencies and does not attempt to confirm that the pre-efficient plan represents the current performance. A separate mandate has been issued to Gleeds to assess the basis of costs in the pre-efficient plan numbers.

Findings against the seven considerations

Introduction

In this section we present our summary of Findings from the route meetings against the seven considerations set out in the mandate. For more details please refer to Appendix 2, which contains our notes from the 8 route meetings from which these summary findings have been derived.

Consideration number 1

The rationale and rigour of challenge for efficiencies that were included/not included within the plan:

Our summary findings are:

1. There is a consistent strong route ownership for efficiency plans.
2. The plans are compiled 'bottom up' as they are comprised of many separate initiatives; the exception being renewals in Anglia Route, which is discussed under Consideration number 6 below.
3. The documented rationale for including initiatives in the plan was stronger than for those initiatives that were not included.
4. Potential efficiencies have not been adopted where the industrial relations risk is high and considered by Network Rail to outweigh the benefits.
5. There is evidence of challenge and a sense check by senior management within the routes.
6. There is also evidence of challenging by the central Business Review Team (BRT) through their "heat-maps" that make comparisons between the routes, see Table 1 below.

7. The routes maintain their own lists of the 'bottom-up' initiatives and these can be mapped to the standard BRT categories.

8. The governance already in place within the routes that is used for monitoring CP5 efficiencies is being continued to monitor and drive the CP6 efficiencies plans.

Table 1 below shows the OPEX and CAPEX cost efficiencies for each Route, expressed in £m and as a percentage of the pre-efficient cost. (Source: "SBP CP6 Consolidated Efficiency Groupings - Opex.xlsx " and "SBP CP6 Consolidated Efficiency Groupings - Renewals.xlsx".)

Table 1 shows a very consistent level of target OPEX efficiencies when comparing across the Routes.

Recognising the degree of challenge through the Asset Working Groups, it is believed that the slightly greater spread of targets for CAPEX efficiencies is reflective of the differing mix of asset renewals across the Routes.

Route	Ops & Maintenance (Opex)		Renewals (Capex)	
	£m	%of pre-efficient	£m	%of pre-efficient
Anglia	-45.7	-4.7%	-166.6	-9.8%
LNEEM	-103.5	-4.9%	-219.9	-6.9%
LNW	-149.6	-5.3%	-279.4	-10.1%
Scotland	-128.8	-7.1%	-180.6	-8.3%
South East	-36.2	-6.4%	-55.7	-6.6%
Wales	-54.2	-6.5%	-134.2	-10.6%
Wessex	-59.3	-5.5%	-133.0	-9.0%
Western	-62.8	-6.3%	-155.1	-8.4%
Total, all Routes	**-640.1**	**-5.7%**	**-1,324.5**	**-8.7%**

Table 1: Efficiencies, £m and %, by Route

The Routes reported that the standard BRT breakdown structure and nomenclature for consolidation of efficiencies and headwinds evolved during the planning iterations. In addition, some inconsistency between Routes was noted in the allocation of similar initiatives to different categories prescribed by BRT. A stable breakdown structure available from the outset would have provided a clear set of categories within which

the routes could develop their efficiencies and headwinds. However, this does not appear to have detracted from the intent to promote development and ownership of individual initiatives within a Route and is unlikely to have led to major inaccuracies in the allocation of efficiencies and headwinds.

Examination of detailed Route plans reveals that the major part of the value of efficiencies is derived from a small number of initiatives. These include for OPEX: Intelligent Infrastructure, LEAN, NOS/ROC migration, Supply Chain Organisation initiatives; and for renewals: Supply Chain Organisation initiatives, stable workbank, optimisation of access, LEAN.

Tailwinds are not identified separately in the Network Rail consolidated reports presented with SBP. These were discussed with Routes and evidence of some tailwinds was found. Total amounts are relatively small.

Consideration number 2

The rationale and rigour of challenge for headwinds that were included/not included within the plan:

Our summary findings are:

1. There is noticeably less route ownership for headwinds than efficiencies; we believe this is because a large number of headwinds have been centrally specified with calculation formulae for routes to apply locally.

2. There is no evidence of challenge or mitigation by the routes of the financial values for the headwinds recorded in the plans.

3. Some items have been incorrectly identified as headwinds.

4. To put headwinds in context, across all the 8 route Operations Maintenance and Renewals (OMR) plans there are:

   - £1,965m (8.5%) are defined as 'gross' efficiencies, see Table 1

   - £712m (2.8%) defined as headwinds, see Table 2

   - The headwinds and efficiencies have then been presented together as 'net' efficiencies of 5.7% of the pre-efficient cost

Table 2 below shows the OPEX and CAPEX headwinds in the plan for each Route, expressed in £m and as a percentage of the pre-efficient cost. (Source: "SBP CP6 Consolidated Opex.xlsx " and "SBP CP6 Consolidated Renewals.xlsx".)

This shows a very consistent level of target headwinds when comparing across the Routes, with the minor exceptions of Wessex and Western renewals. These exceptions are considered to be a reflection of the judgements applied by the Routes, rather than a departure from the process. e.g.: Western advised that including the costs of increased line speed to the West is influencing the quantum of their renewals headwinds.

Route	Ops & Maintenance (Opex)		Renewals (Capex)	
	£m	%of pre-efficient	£m	%of pre-efficient
Anglia	22	2%	27	2%
LNEEM	66	3%	87	3%
LNW	59	2%	70	3%
Scotland	33	3%	52	3%
South East	55	3%	54	3%
Wales	20	3%	19	2%
Wessex	32	4%	59	5%
Western	35	3%	22	1%
Total, all Routes	**322**	**3%**	**390**	**3%**

Table 2: Headwinds, £m and %, by Route

The greater number of OPEX headwinds is comprised of items advised by BRT (e.g. holiday pay for overtime, fatigue management, apprenticeship levy), with few examples of items originated within the Routes. Examination of detailed Route plans reveals that the major part of the value of renewals headwinds is derived from just two categories; namely, increased contract rates driven by market pressures and access (both reduced access due to traffic growth and frustrated optimisation of access). It appears that less attention, in general, has been given by the Routes to headwinds compared with efficiencies. No mitigation and/or factoring down of headwinds cost estimates have been observed during the review. Most of the headwind items identified by BRT and provided to Routes have an accompanying template formula for evaluation, which the Routes have applied to their situation. e.g. to ensure compliance with NR people

fatigue standards, the LNEEM Route undertook an analysis of the number of current signaller rosters with >60hr breaches. This identified that an additional 57 heads are required for CP6 to meet required standards. For each additional head required, the Route applied an average salary (based on 3 years of Route CP5 mean pay data, including pension and NI, inflated to 17/18 prices) to determine the £s saving.

Consideration number 3

Sharing of initiatives and good practice between routes:

Our summary findings are:

1. Cross route working group structure is led by Directors of Route Safety and Asset Management, which provides a level of authority and leadership to the working groups.

2. There are a consistent set of initiatives being worked on across routes.

3. Although not 100% precise the standard nomenclature from BRT is helpful to shape initiative categories, these are:

- CAPEX: Access, Early Contractor Involvement, Stable workbank, develop works delivery, LEAN, Electrical Safety Delivery, innovation and technology, improved contracting and supply chain operations.

- OPEX: Access, Standardised tasks, ROC migration, organisation restructure, multi-skilling, Intelligent infrastructure, ESD, innovation and technology, improved contracting and supply chain operations and LEAN.

Consideration number 4

The level of financial risk associated with each Route's approach:

To aid the discussion around financial risk, Figure 1 below provides the structure by which the Routes were asked to present their pre and post efficient costs. This is based on the Network Rail BRT 'Fishbone' components.

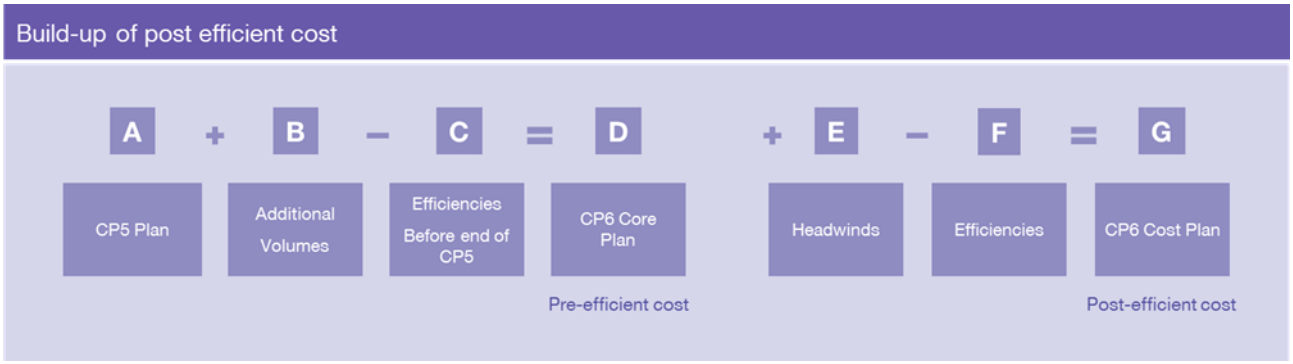

Figure 1: 'Fishbone' structure to the presentation of Route costs

Our summary findings on the level of financial risk are:

1. For efficiencies cost estimates, component F in Figure 1, our findings are:

   - Estimating cost efficiencies has taken account of uncertainty and learning from the experience of difficulties in CP5 realising financial benefits (Opex) as opposed to saving of task hours only.

   - All efficiency cost estimates are at an early stage and are built up with judgements e.g. LEAN is an efficiency initiative with a target budget with a confidence level based on CP5 experience and wide-spread investment in resources being Lean trained.

   - Confident and strong ownership of the achievability of cost estimates and learning of how to bank Opex savings from CP5.

2. For headwinds estimates, component E in Figure 1, these are based on centrally provided formulae + local judgement. There is no evidence of factoring down by the routes, as there is with efficiencies, and there is no evidence of management mitigation plans for the financial impact.

3. There is a lack of transparency of the level of risk already included in the CP5 plan (component A) and what is included in the CP6 core plan (component D) i.e. how the CP5 plan has been developed through to the CP6 pre-efficient costs. To provide some transparency of this movement we undertook a basic unit rate comparison analysis, which is described later and set out in Table 3 below.

Efficiencies and headwinds estimates

The Routes have employed a range of methods to evaluate the efficiencies and headwinds estimates.

OPEX costs have generally been easier to evaluate than CAPEX as they relate to the more definitive cost of a forecast headcount profile. Routes have forecast their headcount based upon headcount reduction initiatives and/or major organisational change. e.g. LNW provided evidence of a profile of headcount per grade through to the end of CP6; and Anglia cited a major organisation restructure planned for year 2 of CP6. Routes described how many theoretical OPEX efficiencies are only realised when posts can be saved. e.g. time will be saved taking a maintenance possession using remote ESD compared with traditional methods, but that will not be banked unless gang sizes can be reduced or additional units of volume can be delivered within the same overall possession period. This is an example of the difficulty of assigning individual initiatives to bankable financial benefits.

There is evidence that the performance in some areas during CP5 was very inefficient. e.g. Wessex major signalling renewals performance against plans was poor and reported by the Route as being due to other schemes being prioritised for the use of scarce key resources, commissioning has been left incomplete and there are a high number of snags. This creates a very inefficient cost as the start point for measuring CP6 efficiencies. "CP5 one-off events" are identified in the fishbone template; but we have not found evidence that factors such as this described for Wessex are being applied to reduce the CP5 exit costs down to a representative CP6 pre-efficient cost.

With the exception of headwinds, good levels of detailed workings are documented. However, the efficiency targets are based upon the quality of the base estimate, the application of various deliverability and risk factors and the experience and judgement of those involved. It also reflects individual interpretation of what is the sensible balance between reaching for all possible efficiencies and what is deliverable. Our view is that the combined effect of all of these factors is to produce (net) efficiency plans with a high confidence of delivery. i.e. they are not stretched targets.

The Executive Summary of the IP Deliverability Assurance Report references access: "A simplistic review using cost per possession hour extrapolation for CP6 renewals was carried out which prompts an immediate question of the reality of securing higher access levels for years 2, 3 & 4 of CP6. i.e. demand for access in years 2-4 of CP6 exceeding what is currently anticipated to be available" If re-phasing of CP6 works is required in response to this observation, then this will be counter to the concept of stable workbank planning which is central to a large proportion of the targeted efficiencies.

Unit rates – CP6 core plan

Network Rail BRT have advised that the routes were asked to build up their plan on a project by project basis, based on their expert knowledge of renewal and maintenance requirements to maintain the performance of the infrastructure in CP6; they were not asked to do this on a unit rate basis. However this means that Routes made judgements about the delivery of their plans which are embedded within the CP6 core plan and which will impact effective unit rates and the amount of embedded risk provision.

Unit rate analysis and comparison of renewals forecast provides a basic assurance check of the assumptions and comparison of the basis of the CP5 and CP6 plans across routes. Unit rates vary according to many factors, including: volumes being delivered in a Control Period (leading to variances in contractors prices), possession strategy, geography and locally installed assets (e.g. working on electrified vs. non-electrified line). This is acknowledged by the Routes and by BRT to be complex.

BRT have advised that they rely upon STE (the technical authority) to assure the volumes in each of the Routes for asset maintenance and renewals. A review of the STE Assurance documentation in the SBP submission reveals that this assurance is for adherence to STE policy and long-term sustainability of assets and does not seek to assure unit rates. The Routes also advised that unit rate assurance had been undertaken by Network Rail Infrastructure Projects (IP). This unit rate assurance does not form part of the SBP submission and was not available during this review. The CP6 SBP Renewals Cost Assurance Report examines comparisons between the Routes for average unit rates per Asset only within CP6. i.e. there is no Network Rail assurance presented of the development of a CP5 exit unit rate through to a CP6 pre-efficient unit rate.

As some of the efficiency estimates are calculated as a percentage of the pre-efficient cost and therefore any uncertainty in that pre-efficient cost will reflect as uncertainty in the stated efficiency. e.g. efficiencies from Supply Chain Office (SCO) initiatives are all derived as a percentage of the pre-efficient cost. (Some other efficiencies are purely headcount related and therefore not a simple percentage of CP6 core costs).

A detailed review and validation of pre-efficient unit rates for renewals in CP6 is outside the scope of our mandate. To provide confidence in the consistency of unit rates being used as a basis for the CP6 pre-efficient costs (component D in Figure 1) and to compare the development from the CP5 plan (component A in Figure 1) we undertook a basic assessment of effective unit rates.

Taking track renewals as an example, we analysed the work mix (by value), as several Routes cited this as the reason for significant changes in unit rates between CP5 and CP6. However, we found that work mix variance is low overall and generally within the range -8 to +8% (see Table 3 below for average across all Routes).

		Average CP5 work mix	Average CP6 work mix	Average % difference
	Fencing	3%	4%	1%
Off-track total		**3%**	**4%**	**1%**
	Refurbishment	8%	7%	-2%
	Replace - full	25%	29%	5%
	Replace - partial	34%	33%	-1%
	Slab track	1%	0%	-1%
Plain line total		**69%**	**69%**	**1%**
	Abandon	2%	0%	-1%
	Refurbishment	5%	3%	-2%
	Remodel	0%	0%	0%
	Replace -full	22%	21%	-1%
	Replace -partial	0%	3%	3%
S&C total		**28%**	**27%**	**-1%**

Table 3: Work mix by value – renewals

Thus, it is factors other than work type mix that are influencing the more significant changes in the effective unit rates that are presented in the PR18 SBP. We were advised that many factors are indeed considered when establishing cost estimates; however, the translation from CP5 to CP6 pre-efficient has not been transparent during this review.

Note, in our previous Independent Reporter review of the efficiencies and headwinds process in our Planning Assurance report issued 26 September 2017 recommended that

"….there is a more transparent audit trail of the selection, consideration and approval of unit rates."

Irrespective of the accuracy of unit rates because of issues with blending of different underlying work types, it is of note that this presents a considerable challenge when attempting to measure efficiencies over time.

Tables of efficiencies and headwinds include, in some cases, ranges of uncertainty. It was explained (at meeting with South East) that these uncertainties are not factored into the budget for the Route, but are taken as inputs to development of the Group Portfolio Contingency Fund.

Consideration number 5

The deliverability challenge of achieving any efficiencies in the plan:

Our summary findings are:

1. A significant part of the Efficiencies are based on improved work bank planning and access arrangements, which require full integration with the supply chain and the successful completion of any new contracting arrangements.

2. The delivery of contract and procurement (C&P) efficiencies requires further development in most routes. New contracts are not yet established to support or cash the initiatives and procurement plans have not been provided. C&P resources have been devolved into the routes to plan and deliver these efficiencies.

3. Efficiencies are highly interdependent (complex) including areas such as access, work bank planning and the supply chain; but these dependencies are not fully developed.

The plans for delivery over a period extending to March 2024 are not yet fully developed in detail, although much of the short range planning is well advanced. Thus, until detailed plans are in place, all of the CP6 forecast core plans, efficiencies and headwinds are based on judgements with an associated level of uncertainty. The core plan (pre-efficient cost) is stated to be at P50 confidence level, with intent to apply

efficiencies and headwinds also at P50. Our view is that the combination of a desire to identify realisable efficiencies combined with factoring down and the offsetting effect of some of the headwinds results in a probable confidence level for (net) efficiencies of considerably more than P50.

Network Rail Level 2 Assurance Reports use a standard scoring system, using a 1-5 scale based on Office of Government Commerce (OGC) methodology. See Appendix 3 for more detail of the scoring system used. We have summarised the Headwinds and Efficiencies scores from each of the Route Strategic Plan Assurance Reports into Table 4 below.

Route	Assurance score
Anglia	3
LNEEM	4
LNW	3
Scotland	3
South East	4
Wales	3
Wessex	3
Western	3

Table 4: Network Rail assurance scores

This shows that efficiencies and headwinds detailed in six out of eight Route Strategic Plans are "Generally fit for purpose but … plans have one or more important but not critical issues." No Route plans have been graded as "… robust plans demonstrated in all important areas. Entirely fit for purpose. "

Assurance of Route efficiency costings has been carried out for some maintenance and renewals activities by IP e.g. in Western. A more independent and consistent approach is evident in those Routes (South East and LNEEM) that have engaged an external consultant throughout the process to collate and verify the data.

Consideration number 6

The application of any central guidance issued:

A key piece of central guidance from BRT is the "fishbone" analysis which provides a structure to present the cost build-up from the CP5 plan across to the CP6 post efficient cost, as illustrated in Figure 1 below.

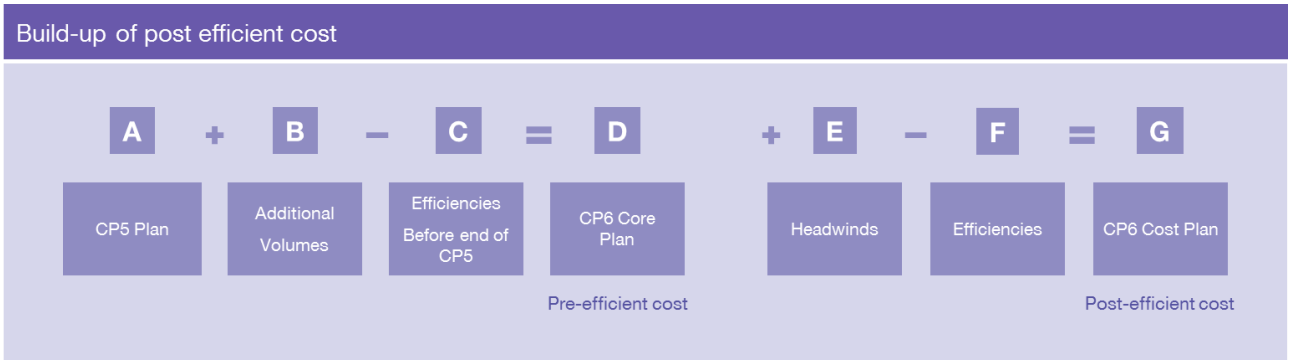

Figure 1: 'Fishbone' structure for the presentation of Route costs

Our summary findings are:

1. There is good consistency and understanding of the central guidance on the standard efficiency categories and routes have maintained local mappings to BRT categories.

2. The guidance to the routes to present their overall cost build-up story according to the "fishbone" analysis as illustrated in Figure 1 above is very complex and as a consequence we did not find evidence of strict compliance by the routes.

3. Anglia route is an exception in their method of construction of their core CP6 plan. They have used a bespoke model to build up the renewals element of CP6 core plan.

Basis of efficiencies

The Routes can be described as having followed one of three approaches to the evaluation of renewals efficiencies, namely:

Bottom-up - Individual initiatives have been assessed for the impact they are anticipated to have and the results have been summed. There is some evidence of the combined effect of several initiatives being considered to deliver a single bankable cost efficiency. e.g. Anglia has a reorganisation planned for year 2 of CP6 to capitalise on a range of signalling initiatives. However, there are also examples of where the combined impact of interrelated efficiencies and headwinds has not been considered. e.g. efficiencies leading to headcount reduction being counter to headcount increase driven by the introduction of fatigue management policies. Thus, the assessment of the combined effect of individual initiatives is inconsistent.

Bottom-up plus top-down check - South East only adopted this approach. Individual initiatives have been assessed for the impact they are anticipated to have and the results have been summed. This has been followed by a top-down sense check of the percentage efficiencies calculated, to confirm that they are within "expected ranges". The "expected ranges" are based upon personal experience and judgement. It was reported by the Route that no significant changes were made as a result of this sense check; however, we were unable to verify this.

Top-down - This approach was only adopted by Anglia. They commissioned consultants (PWC) to build a renewals cost model using actual data from CP5 years 1-3. The pre-efficient cost of CP6 was then calculated by inputting the CP6 workbank into the model. The post-efficient cost of CP6 renewals is based upon Infrastructure Projects (IP) unit rates at a P50 confidence level. The difference between pre-efficient and post efficient costs derived has been taken as the efficiencies total of £167m. This has then been disaggregated into the various initiatives.

Anglia stated that the post-efficient IP unit rates were validated by the Asset Working Groups and have efficiency plans built into them. However, all other Routes have used pre-efficient IP unit rates to which they have then applied efficiencies. Note also that the CP6 SBP Renewals Cost Assurance Report (page 21) states: "Anglia stated that their comparatively high rate is driven by the complexities of the specific signalling projects planned. Particularly, Cambridge (an upgrade from NX panel Signalling) and Clacton (an upgrade from Mechanical Signalling). Both these factors are increasing the UR due to them being greater scope than a standard renewal. However IP Signalling are of the opinion that the PwC model is misusing the input data." A detailed examination of IP pre-efficient and Anglia post efficient unit rates is required to confirm that Anglia have not taken a pre-efficient renewals cost as their target post-efficient cost. This analysis is outside the scope of this review, but is necessary to confirm the validity of the start point for efficiencies being targeted by Anglia. Irrespective of the start point, the findings on headwinds and efficiencies elsewhere in this report are considered to apply equally to Anglia.

Table 5 below shows, which approach to renewals efficiencies, has been adopted by each of the Routes:

Route	Bottom-up	Bottom-up plus top-down check	Top-down
Anglia			√
LNEEM	√		
LNW	√		
Scotland	√		
South East		√	
Wales	√		
Wessex	√		
Western	√		

Table 5: Strategic approach to renewals efficiencies

Application and interpretation of headwinds

Network BRT provided the following rationale for including headwinds as an element of the cost plan.

"Network Rail is subject to external factors which have an influence on our cost base. We have historically had a keen focus on the positive management actions which have improved the cost of delivery and have been able to demonstrate this in submissions for funding and in annual narrative of financial performance.

Until recent times there has been less review of those factors which increase cost and their lack of visibility has meant that we have in effect have had to reduce costs in order to stand still from a superficial financial view point.

The CP6 submission attempts to correct the issues found in CP5 and to make transparent those factors of which we are currently aware which are reliably predicted to increase the cost of delivery. By making these factors part of our funding reduces the likelihood of financial failure from factors whilst are mitigated, some financial impact is outside of management control."

Headwinds (component E) is an element in the "Fishbone" cost presentation structure in the CP6 submission which seeks to provide an audit trail from the CP5 cost plan (component A) across to the CP6 post-efficient coat (component G). We repeat below Figure 1 used earlier for context.

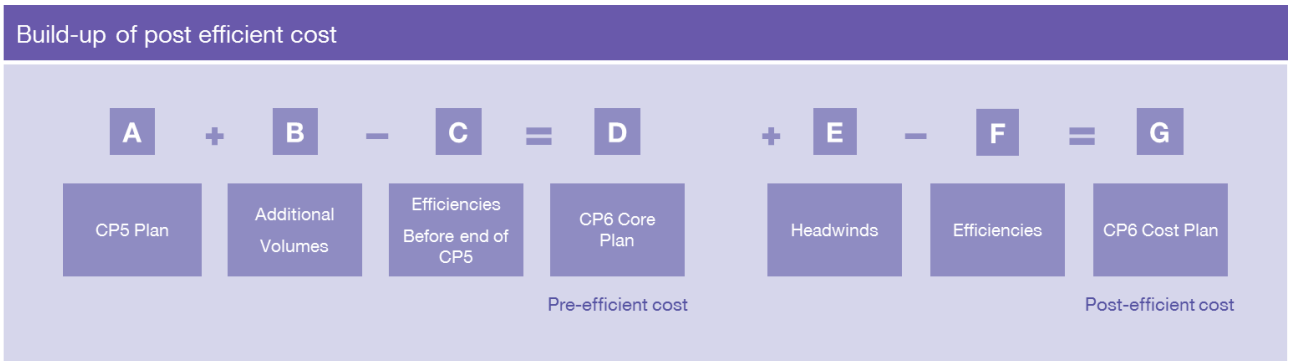

Figure 1: 'Fishbone' structure for the presentation of Route costs

BRT provided a further clarification paper on the intent of the fishbone framework and interpretations:

"Structural factors (drivers for component B) are those things which describe why the amount of work changes. This has nothing to do with the cost of delivery, just about volumes. A headwind (component E) is something that predominately changes the cost of delivery and not the amount of work which is done. This is more about unit rate than it is volume."

Our view is that although the intent of presenting headwinds as factors that affect the cost of delivery of a base plan as opposed to those factors that increase the amount of work in the base plan is logical, it is too complex for the routes to have rigorously followed. If headwinds are not used correctly as an element then they can potentially be cost provisions that could be accounted for elsewhere in the build up to the pre-efficient cost. This creates the potential for overlap/double counting of costs.

It is also important to distinguish between known headwinds i.e. factors which are known to be different and will affect the costs between CP5 exit and CP6 start and unknown headwinds which are contingency provisions for changes to the delivery of the CP6 cost plan which are anticipated but which are not currently predictable in terms of cost impact.

To justify that a known headwind is valid to include in component E then the routes must demonstrate that they have rigorously followed the cost build up structure in Figure 1 and that changes between the CP5 cost plan and the CP6 core plan are only due to changes in volumes due to activity drivers and efficiencies realised in CP5 i.e. routes should not have taken account of other factors that affect the costs of doing work between CP5 and CP6. Our basic analysis of unit rates described in consideration 4 indicates that the routes have made judgements about the changing costs of delivering in CP6, which is not a rigorous application of the framework.

Whilst our findings are that there have been difficulties in rigorously applying the cost build up framework and hence the justification for headwinds, we acknowledge that it is important to ensure full credit can be recognised for the for the achievement of efficiencies against a stable baseline as this strengthens the incentive to achieve more. However it would be much simpler to apply change control to the efficiency initiative plans when the baseline has changed.

Here are some examples of inconsistent application of headwinds.

- The South East Route Strategic Plan (Page 30, Item 11) cites headwinds not materialising as an opportunity.
- The Network Rail fishbone framework guidance documents identify "Additional legislative compliance" as an adjustment to be applied between CP5 exit and pre-efficient cost; whereas Routes have been directed by BRT to evaluate "Fatigue Management Policy" as a headwind.
- There are examples where a headwind is directly offsetting an equivalent efficiency. e.g. CP6 yr5 LNEEM Track "Supply chain initiatives" headwind £0.9m offset against efficiency of -£1.4m and "Optimisation of access (use, agreement, planning)" headwind £3.5m more than negates an efficiency of -£1.5m.
- We consider that some items identified as headwinds in the Route Strategic Plans should be correctly identified as risks e.g. if inflation indices exceed forecasts.

To simplify interpretations and improve consistency we recommend that the headwinds contained in the route plans should be re-categorised and we have made our suggested re-categorisation in Tables 6 and 7 below. The re-categorisation we are proposing uses the following key:

A. Headwind that appears to be a correct interpretation.

B. Headwind is already known and could have been included, in whole or in part, in the CP6 core plan, as an adjustment between CP5 exit and CP6 pre-efficient. Due to the lack of transparency of the CP6 core cost build-up there is a possible double counting for these headwinds.

C. Headwind, which has an equivalent efficiency that has been factored down for delivery uncertainty/risk i.e. there is an overlap between the headwind and this factoring down of efficiency.

D. No mitigation or factoring down of headwind is apparent.

E. Is a risk that should already be covered by a combination of risk included in the unit price and the Portfolio Risk Allowance.

OPEX headwinds proposed re-classification

Table 6 lists, in descending order of value, the significant OPEX headwinds.

Headwind description - OPEX	Cat.	Comment
Fatigue Management	B	Network Rail declared policy
Apprentice Levy	B	Law effective from 06/04/2017
Holiday pay allowance for overtime	B	Precedent established during CP5
Increased contract rates driven by market pressures	C	Associated efficiency on contractor rates
Increased task complexity	B	CP6 Core Plan should reflect cost of the woks as planned
Impact of future franchise increased traffic	A	Only for new output requirements contracted in CP6

Table 6: Re-categorisation of headwinds – OPEX

CAPEX headwinds proposed re-classification

Table 7 lists our proposed re-categorisation of CAPEX headwinds by category.

Headwind description CAPEX	Cat.	Comment
Category A – Headwind that appears to be a correct interpretation.		
Franchise impact of increased traffic	A	Only for new output requirements contracted in CP6, not for known franchise changes
COPI v RPI (assume 1% higher)	A	
Category B – Headwind is already known and could have been included, in whole or in part, in the CP6 core plan, as an adjustment between CP5 exit and CP6 pre-efficient. Due to the lack of transparency of the CP6 core cost build-up there is a possible double counting for these headwinds.		
Increased task complexity	B	CP6 Core Plan should reflect cost of the woks as planned
Historic price/currency impacts leading to difference between 'current' rates and average CP5 rates	B	CP6 Core Plan should reflect the best estimate of the cost of the woks
Complexity due to electrification	B	CP6 plan should reflect evolving railway environment
Increased rates due to volume reductions (fixed costs spread over fewer volumes)	B	CP6 Core Plan should reflect cost of the woks as planned
Obsolete technology - higher support costs, scarce resources, skills fade, etc.	B	
Fatigue Management Policy	B	Network Rail declared policy
Synergies between enhancements and renewals work in CP5 not being repeated	B	
Known environmental issues (planned SSSI)	B	CP6 plan should reflect evolving railway environment
Limited access to Stations	B	CP6 Core Plan should reflect cost of the woks as planned
Costs funded elsewhere in CP5	B	Specific provision to be made in CP6 Core Plan

Headwind description CAPEX	Cat.	Comment
Lease costs at Ryton	B	Route share of costs of a shared facility
Category C – Headwind, which has an equivalent efficiency that has been factored down for delivery uncertainty/risk i.e. there is an overlap between the headwind and this factoring down of efficiency.		
Increased contract rates driven by market pressures	C	Associated efficiency on contractor rates
Reduced access	C	Large proportion of efficiencies dependent upon improved access planning
Optimisation of access (use, agreement, planning)	C	Large proportion of efficiencies dependent upon improved access planning
Supply Chain Organisation initiatives	C	Large proportion of efficiencies dependent upon improved SCO initiatives
Uncertainty in workbank	C	Large proportion of efficiencies dependent upon stable workbank
Reduced access/Shorter blockades	C	Large proportion of efficiencies dependent upon improved access planning
Shorter blockades	C	Large proportion of efficiencies dependent upon improved access planning
Other innovation and technology benefits	C	
Improved contracting strategies/rates (Inc. packaging of works)	C	Large proportion of efficiencies dependent upon improved SCO initiatives
LEAN (Right First Time delivery, Better Every Day, Structured Continuous Improvement)	C	
Category D – There is no apparent mitigation or factoring down of the headwind.		
Re-mobilisation costs following end-CP5 ramp-down	D	No mitigation or managing down evident
Category E – Is a risk that should already be covered by a combination of risk included in the unit price and the Portfolio Risk Allowance.		
Other (agreed with BRT)	E	
Increased cost of third party land access or acquisition	E	

Headwind description CAPEX	Cat.	Comment
Unknown policy and/or legislation changes	E	Not a certain or known impact, therefore a risk
External draw on signalling resource (HS2 etc.)	E	Not a certain or known impact, therefore a risk
Impact of HS2 and other GB infrastructure projects	E	Not a certain or known impact, therefore a risk

Table 7: Proposed re-categorisation of headwinds – CAPEX

Consideration number 7

The role of central functions, such as STE, in the delivery of the Route's plans:

Our summary findings are:

1. Commercial & Procurement (C&P) have embedded their resources within the routes to take forward the achievement of C&P central initiatives.

2. There are strong links back to STE initiated initiatives through the asset efficiency working groups, specifically the O&M for Intelligent Infrastructure which is dependent upon the successful and timely delivery of a number of STE development projects.

3. The experience of implementing the ORBIS initiatives (good benefits realisation early on, but tailing off) and difficulties realising the benefits in CP5 has been taken account of in the CP6 plans.

4. Supply Chain Efficiencies are enabled by the central function and benefitted by the route. However, relies on improved workbank planning to avoid changes to use of SCO services.

Efficiencies arising from Supply Chain Office (SCO) initiatives have been estimated by SCO and handed down to Routes. Theses efficiencies have been adopted by Routes unchanged, but are based upon a common understanding of volumes to be delivered throughout CP6. i.e. Routes are required to deliver against their forecast in order for SCO to be able to deliver efficiencies back into the Routes. Ultimately, accountability is with the Routes as they have adopted these efficiencies as part of their committed plans.

Conclusions

Our conclusions set out below are structured around the four Questions in the mandate.

Question 1

Is the efficiency and headwind framework in which the routes have been asked to operate within a reasonable framework?

Yes, the efficiency and headwind framework is entirely logical albeit it is complex for the routes to fully comply with rigorously and consistently. Both the interpretation of headwinds and the demonstration of the cost movement between CP5 exit and the pre-efficient CP6 Core Plan are both complex parts of the framework.

Question 2

Has each Route followed a reasonable process within the framework?

Yes, with the exception of Anglia (see Consideration 6, above). Conducting the process has contributed to development of behaviours appropriate to promotion of the Route devolution agenda.

Question 3

Are the plans produced by each Route a reasonable outcome of the process undertaken?

Well-structured plans have been developed for the efficiencies. However, there is a degree of uncertainty in the quantum of both the efficiencies and the base costs to which the efficiencies are being applied (see Consideration 4, above).

The plans for headwinds include some items that may be overlapping/double-counted and that we consider should be re-categorised and/or an allowance made for them elsewhere in the budget. Also there is no evidence of mitigation/factoring down of headwinds (see Consideration 2, above).

Question 4

Have any factors been identified that merit further consideration, that might materially impact the route headwinds/efficiencies plans?

We have identified the following factors that merit further consideration:

1. Provision for uncertainty in efficiencies estimates

The estimates for the efficiency initiatives have been factored down to reflect deliverability and other risk factors. On a standalone basis this would be reasonable, however there are multiple places within the build up to a post efficient cost that contains risk provisions. For example, the core CP6 plan implicitly includes a risk allowance as it is based on outturn performance and then there is also a Group Portfolio Contingency Fund envisaged to provide a high confidence in deliverability of the CP6 plan. Our concern is that there appears to be several places containing uncertainty provisions across the post efficient cost build up and raises a question whether the specific factoring down of efficiency estimates is appropriate.

2. Consistency of the CP6 core plan as a baseline for efficiencies and headwinds

It is important that headwinds and efficiencies are applied to a consistent set of core route CP6 plans i.e. pre-efficient costs that have been prepared on a consistent basis. Otherwise the comparison of the percentage efficiencies planned by each route would be undermined and would not be meaningful. The BRT 'Fishbone' presents a consistent method by which the post-efficient cost should be built up from a known CP5 outturn performance.

We became concerned that there was no transparent evidence that the routes had consistently followed the 'fishbone' structure to demonstrate the movement between current CP5 costs and the pre-efficient CP6 costs. When queried the routes put apparent changes in the high-level unit rates down to changes in the underlying work type mix; whereby constituent work types have different unit rates. To verify this we undertook an analysis of Unit rates at lower level work types. We compared unit rates implicit in the CP5 outturn costs with CP6 unit rates derived from the CP6 core plan (pre-efficient) estimates. This analysis shown a wide variation in the differences between CP5 effective unit rates and the derived CP6 planned unit rates. This implies that judgements have been made by the routes to change the effective unit rates

between CP5 and CP6 without a transparent explanation. We believe that the translation of CP5 exit rates into CP6 pre-efficient rates for Core Plan should be consistent and transparent as the 'fishbone' intends.

A specific consideration is the method by which Anglia route has derived its pre and post efficient costs.

3. Headwinds cost estimates are not justified

We have a number of concerns regarding the use of Headwinds which taken together inform our view that the headwinds cost estimates are not justified. Our first concern is the interpretation of what is a genuine headwind as opposed to something that is either a known risk or should be accounted for in the core CP6 plan. Given our last point about the lack of transparency in unit rate changes for the core CP6 plan, it is not possible to establish if these headwinds are already accounted for in the core.

Secondly, there is no evidence of the headwinds cost estimates being factored down for uncertainty and to account for sensible mitigating actions that could reduce the impact of a genuine headwind. The overall impression is that headwinds have been interpreted as a provision by the routes.

To illustrate these points we have suggested in the main body of this report a re-categorisation of the types of headwinds presented in the route plans.

4. Measuring success of efficiencies and providing incentives for the routes

The efficiency initiatives are at an early stage and it will be several years before enabling actions will be completed and the efficiencies will start to be realised. Also, a number of the efficiency benefits are complex and do not trace directly to a financial cost saving. This means that there must be other transparent incentives other than cost savings for the routes to continue their efforts during the Control Period to enable the efficiency benefits. We recommend that a measure that incorporates achievement of work volumes planned is used alongside cost as an efficiency measure for both Capex and Opex. This could be effective unit rates at the right level to avoid work type mix changes obscuring unit rates at a blended level e.g. track unit rate for plain line is too high level. The routes suggested that the Financial Performance Measure (FPM) currently reported to ORR could possibly be extended to cover maintenance volumes as a possible measure.

5. Annualised cost forecasts

We met with DfT who were interested to what extent that the constraint associated with having annualised cost targets for each separate year of the Control Period has been taken account of in the development of the SBP cost plans. The general feedback from the routes is that they were aware of the possible introduction of this constraint but was not a factor they had explicitly accounted for in the plans.

Appendix 1 – Log of meetings held

Date	Meeting	Attendees			Comment
		Nichols	Network Rail	ORR	
23/01/18	ORR deep dive on support costs for Contract & Procurement	Stephen Jones Graham Tillett	John Dickson, C&P Director Steve Armstrong, Transformation Director James Wood, Financial Controller	Carl Hetherington Steven Dennis James Tricker	Nichols attended as observers
23/01/18	ORR deep dive on support costs for Supply chain management	Graham Tillett	Steve Armstrong, Transformation Director James Wood, Financial Controller Robert Morton, Director of Supply Chain Michael Brinkley	Carl Hetherington Steven Dennis James Tricker	Nichols attended as observers
23/01/18	ORR 2nd main STE strategic plan meeting	Stephen Jones Graham Tillett Bernie Partridge	Graham Hopkins, Group STE Director Guy Woodroffe, Head of R&D RSSB Jon Shaw, Chief Engineer	Carl Hetherington Steven Dennis	Nichols attended as observers
29/01/18	Tri-partite planning/kick-off meeting	Stephen Jones Graham Tillett	Jonathan Haskins Piers Treacher Sean O'Reilly	Graham Richards Andy Lewis John Larkinson	
30/01/18	Group Analyst, Business Review Team	Graham Tillett	Sean O'Reilly	-	Establishing NR point of contact; initial data capture

05/02/18	Route Businesses National Finance Team	Graham Tillett	Neil Cook Hannah Anderson	-	Overview of Route Benefits Tracking process & tools
27/02/18	Meeting with Route – South East	Stephen Jones Graham Tillett Bernie Partridge	Duncan Rimmer, Route FD Mark Morris, DRSAM Simon Howard, Route Financial Controller Ed Wells Matt King, KPMG advisor Carl Grewer Donna-Marie Moser, Route C&P Manager Henrietta Foster James Melton, KPMG advisor	-	
01/03/18	Department for Transport (Telecon)	Stephen Jones Graham Tillett	-	-	Discussion with Oliver Mulvey & Mark Aldworth to capture DfT perspective and areas of interest for Review.
02/03/18	Meeting with Route - Wessex (Telecon + Webex)	Stephen Jones Graham Tillett Bernie Partridge	Sam McCarthy, Route FD Stuart Kistruck, DRSAM Louise Criddle, PMO Lead	-	
02/03/18	Meeting with Route - Western (Telecon + Webex)	Stephen Jones Graham Tillett Bernie Partridge	David Tunley, Route Asset Systems Int Mgr John Watkins, Route FD	-	
05/03/18	Meeting with Route - LNW	Stephen Jones Graham Tillett Bernie Partridge	Nicola Dean, Route FD James Dean, DRSAM Martin Jurkowski, Planning Lead Ross Redshaw, Senior Financial Analyst	-	

06/03/18	Transport for Scotland	Stephen Jones Graham Tillett	-	-	Discussion with John Provan to capture TfS perspective and areas of interest for Review.
06/03/18	Meeting with Route - Scotland	Stephen Jones Graham Tillett Bernie Partridge	Ben Edwards, DRSAM Adrian Murray, Route Asset Systems Int Mgr Donald Stevenson, IEP renewals Kenny McAlpine, Structures RAM Peter Flanagan, Finance Mgr (Bus. Planning) Anne-Marie Harmon, OPEX plans Tom Greenan, Route FD Liam McQuat Kris Kinnear, Commercial	-	
07/03/18	Meeting with Route - Anglia	Stephen Jones Graham Tillett	Ben Milway, Route FD (acting) Simon Thick, Route Asset Systems Int Mgr Matt Brighton, Senior Financial Analyst	-	
09/03/18	Meeting with Route - Wales	Graham Tillett Bernie Partridge	Andrew Banks, Route FD Jeff Davies, DRSAM Karen Murphy, Route Financial Controller Kate Avery, Change Portfolio Mgr	-	
12/03/18	Meeting with Route - LNEEM	Graham Tillett Bernie Partridge	Gavin Peace, Programme Director (Asset Management Transformation) John Crossland, Maintenance Paul Richardson, Route Financial Controller (OPEX)	-	

			Andrew Murray DRSAM Simon Pumphrey, Civils David Corrigan, ex Route FD Keith Moss, Route FD David Smale, KPMG advisor Luke Carey, KPMG advisor Ben Clarke, Structures Mark Palmer, SCO Peter Hancock, Safe & Efficient Working Roger Griffiths, Track, Sig, E&P RAM		
14/03/18	ORR / Nichols / Gleeds	Stephen Jones Graham Tillett	-	Graham Richards Carl Hetherington Steve Dennis Feras Alshaker	Alignment of Nichols (Efficiencies & Headwinds) mandate with Gleeds (Core) mandate. Gleeds represented by Richard Golding.
09/04/18	NR	Stephen Jones Graham Tillett	Paul Marshall Sean O'Reilly Jonathan Haskins		Review of Draft Report comments
10/04/18	ORR	Stephen Jones Graham Tillett		Graham Richards Howard Taylor Roger Davies	Review of Draft Report comments

Appendix 2 – Notes of Route Meetings

Anglia

Consideration	Notes of Meeting with Route
1	• Large number of ideas coming from current work in progress. • Renewals set at level deliverers will sign-up to. • Multi-skilling not being pursued currently as believes unionisation will block this. • Scope efficiencies for PLPR and ultrasonics delivered in CP5 are baked into pre-efficient costs.
2	• BRT items captured.
3	• FD is Route rep at OPEX Working Groups.
4	• OPEX saving based upon reorg in yr 2 of CP6 – best guess, disaggregated back into individual initiatives. Learnt in CP6 that hours saved not banked until headcount reduced in reorg. • OPEX Volume Benefits Calculator for ORBIS schemes shows benefits factored down by delivery confidence factor, % delivered in CP6 and uniform 75%risk factor (optimism bias). • Experience of ORBIS in CP5 was good benefits realisation early on, but tailing off.
5	• Tracking process in place for CP5, will roll forward. • Part of 4-weekly reporting – principally cost only measure. • DRAM team will drive benefits, not cost using existing process. • Box plan developed for all years of CP6; workbank has location specific access needs identified. Intended to support access efficiencies. • Longer range (than industry processes require) planning in place with TOCs.

Consideration	Notes of Meeting with Route
6	• PWC model used for pricing pre-efficient; IP rates for post efficient; required efficiencies (£167m) disaggregated back into initiatives. Method unique to Anglia, but BRT and other Routes aware.
7	• Anglia control OPEX; CAPEX delivered by IP.

LNEEM

Consideration	Notes of Meeting with Route
1	• In 2017 KPMG were engaged to develop and analyse the detail behind the headwinds and efficiencies. This has led to a detailed level of analysis and outcome. Detail of the source of rates is provided, where items are unit rate and quantity calculated; other items are based on professional judgement but considered detail is provided. • The costing of the early stage design efficiency has been developed by looking at all design variations captures under change control during CP5. The assessment of project variations created the key early stage design efficiency by calculating values and applying a risk factor based on the likelihood of mitigations. • Access improvements are derived from the sharing of work sites along the route. This plans to combine the work types available for implementation and deliver works in multiple sites and reducing the number of single mobilisations. • IP Track rates were provided to the route but these have been challenged as not representing the route outturn costs. The route considered their own outturn data to be more reliable and reduced the cost per metre rate. • First hand data from CP5 outturn rates has been used to come up with the costs after volume loss considerations based on changing turnover. • Signalling rates derived from the Infrastructure Cost Model were higher than the route deemed appropriate, as the majority of LNE schemes in signalling are at the lower end of the collective rates used in the ICM. • In Operations, predictable workloads are aligned to predictable access with a maximised rostering plan set in advance. Plenty of detail is provided in the operations and maintenance plans. • Improved operational works in line with these plans will be in place in year 5 of CP5. Challenges are noted in the delivery of change as challenges in ramping up the new process

Consideration	Notes of Meeting with Route
	and training requirements in CP6 year 1 and 2 will be significant. • The continuous improvement approach has started with the time on tools and ideal state initiatives which link into the requirements of the LEAN initiatives.
2	• BRT items captured.
3	• Local and national working groups have been engaged to generate the efficiency initiatives, however many of the final listed efficiencies are route specific. • The OPEX initiative have been shared with the other routes.
4	• Some Headwinds cost calculations such as changes in standards are an allowance only as detailed are not accurately predictable from past events. Headwinds also include allowances for new technology such as overhead line equipment and the related training. • Contracts and Procurement are re-tendering CAPEX project requirements and thus far rates are lower than previous engagements. The OPEX procurement has included engagement with a local supply chain to increase the number of suppliers and competition in pricing. • Financial risk is linked to the development of better defined remits; early GRIP2-4 design and value management. The remits for all of CP6 year 1 and 2 requirements will be completed by April 2018. • Headwinds have been evaluated and is deemed below a 50% likelihood will not be included. • The OPEX savings are calculated using the ABP tool.
5	• A periodic review is proposed for all initiatives which will update the status of the design, implementation and risk level of the efficiency and measure the success against baseline and the changes affecting the outcomes. This process will be managed by the Change Portfolio Review Group. • The next stage is to set out and develop a process to capture the H&E delivery methods. The periodic reviews plan to look at how the efficiency owners are delivery the requirements. • Signalling contracting strategies are not yet developed and some concern exists around how the supply chain will fit with the CP6 requirements. Frameworks do exist for level crossing works and smaller signalling civil works and interventions.
6	• OPEX efficiencies are a mixture of ground up calculations and top down allowances based on centrally based initiatives.
7	

LNW

Consideration	Notes of Meeting with Route
1	• The headline efficiencies (11 no.) have multiple initiatives beneath them, some are detailed and others less well developed, such as the city strategy which includes items such as land sale. • Detailed analysis has been made by the route of the year one requirements with the supply chain engaged in the process. This has included efficiency planning which is considered ongoing and not a static process. • Under the consolidated headings, some cost calculations and dependencies that make up an efficiency are well understood and calculated on real data and others are less well undeveloped and contain a professional judgement basis. • A spreadsheet ranking the best case and the worst case financial outcomes has been produced. • Technology based listings are largely unproven and further development of the cost benefits is required. The selection of technology based items is yet to be completed. Goals and definitions are being developed as part of the responsible managers objectives. • Organisational re-structure is yet to be fully defined and is based on central organisational change. Approximately one third of total efficiencies values in this area are measurable with the rest not ready to implement. A Head wind exists in this area which may cancel out the efficiency.
2	• BRT items captured.
3	• The LEAN process captures some nationally shared initiatives but most are potential initiatives only and will require continuous development throughout the control period.
4	• The year 1 work bank has been confirmed with the contractors to achieve the stability required to deliver the efficiency benefits. A work bank control process will be used to keep the work bank locked. • LNW are delivering a full volume based first year to achieve demonstrable efficiencies with the supply chain which if successful will be utilised in the following years of the control period.
5	• The key efficiency is a stable work bank and better access planning. The finance team lead by the Route Financial Director are responsible for maintaining focus in delivery of the initiatives. Finance will continue to run existing monthly progress meetings and report on the

Consideration	Notes of Meeting with Route
	progress of the efficiencies. • Commercial management is another target area for delivery of efficiencies. A commercial process document is not yet developed but the ambition in this space is to establish best practice in change control as this has previously not been harmonious between the route and IP. • The route team plan to be engaged in the design phase of the works to have sufficient influence over the designs, methodologies and any additional scope under change. • The executive sponsor for the efficiencies will allocate an initiative leader as the control period delivery begins. • The contractors reporting and overhead requirements are to be reduced to lower the on-costs and better integration with IP commercial delivery and change control will ensure the scope and expenditure is appropriate to the requirements. • A decision to award change will be made following a re-tender or market test challenge on the existing supplier prices to maintain competitive prices. • Revised procurement plans are to be produced showing the reduced burden on contract management and the competitive challenge to change. • Beyond the first year of CP6, about half of the initiatives are still to be developed. • Headwinds do not contain a detailed cost basis unless localised and route specific or locally calculated central headwinds such as IR35 and fatigue management. • Route based contracting strategies are devolved local initiatives including fleet management and other local supply chain involvement in smaller CAPEX and local route works.
6	• Central alignment has been though contracts and procurement, national programmes like the intelligent infrastructure, LEAN and STE plus the integration with national efficiency groups.
7	• Labour and materials in maintenance and operations are initiatives developed by the Network Rail central supply chain and these are provided to the route for them to take onboard and benefit from. Examples are NDS improvements covering materials, plant and haulage.

Scotland

Consideration	Notes of Meeting with Route
1	• In summer 2016 workshops began to consider how projects could be delivered more efficiently if there were no constraints. Brainstorming sessions developed headings and a suite of ideas under each; such as Access, Commercial and Planning. The ideas were challenged out of each group or retained for development. • Asset efficiency groups were developing work bank smoothing strategies before these initiatives were introduced under the central efficiencies and headwinds process. Scotland consider these actions to be more advanced than some routes and as a result the ability to drive further efficiency is not as high due to actions being already in place in CP5. • Each asset group has nine key initiatives with an owner, which are maintained using the renewals governance meetings and the Financial Performance Model. Operations have owners and change managers and use a project on a page process informed by monthly meetings to review initiatives. • Assessment of work types has been undertaken which shows that type of deliverable may be the same in CP6 (bridges works etc) but the actual requirements differ. These differences have been considered when setting the ability of the efficiencies to deliver benefit.
2	• BRT items captured.
3	
4	• In terms of deliverability and financial risk, Structures already have 95% of the CP6 work bank in place. A similar percentage of the works has been price calculated using CP5 outturn rates. • Operational savings though working methods and headcount alterations are not considered bankable in all cases until further into the control period as resource re-allocation is fully developed. • Increases in unit rates is noted. This comes from the stage at which previous contracts were placed when rates were lower due to economic conditions and workloads within the supply chain. A CAPEX civils works PQQ has been issued to engage with a broader set of suppliers for CP6. • Track costs are based on IP Track unit rates and actual cost from the route works delivery teams. Signalling cost is informed by the Infrastructure Cost Model. LEAN initiatives are a target percentage only at this stage. • Headwind cost calculations are, in the majority, a set of allowances based on judgement.

Consideration	Notes of Meeting with Route
5	• The main challenges in the route involve delivery requirements which require different or revised methods; and changes in the profile to undertake more of certain tasks and less of others which differs from CP5. • Good understanding exists around the benefits to alterations in operations where re-allocation of resource and re-training will be implemented. • CAPEX contracting strategies have considered early contractor involvement and highlighting of common touchpoints where the same contractor deliverables can be grouped together and let as a package of works. A corridor approach is to be adopted to link up multiple pieces of work in existing areas with single visit access requirements. • Better engagement policies are planned, to provide for an integrated project management approach, widening the lens to give better pipeline view of work types.
6	• The route has worked with STE on a back to back basis on savings calculated by STE which they believe are achievable in Scotland. Some STE initiatives have been incorporated with local route amendments. • The Financial Performance Model is being utilised which looks at the cost and volume movements to confirm improved value. The data for this is captured appropriately at project level.
7	

South East

Consideration	Notes of Meeting with Route
1	• The basis and assumptions, analysis of cost rates, reliance on establishing key inter dependencies and understanding the risks has been developed through workshops within the route teams, IP and the Centre. • Contribution from route operations staff to develop and understand the deliverability was a key to the selections and the risk assessments were made based on accurately determining requirements and the maturity of the cost elements. • The commercial efficiencies values are a combined total based on IP Track, Route and Procurement. These are at an early stage but have captured target areas which have shown a need or a potential for improvement in previous control periods. • The sums stated rely on many dependencies and assumptions which have been detailed. RAMS have been involved in the rigour of the built-up numbers and retain these as a deliverability challenge in CP6. • Lessons learned from procurement activities during CP5 have been utilised in the CP6 procurement planning and detailing of forward benefits. • Access planning benefits are based on not having the current impacts which have occurred due to failings in integration planning between the route, IP, contractors and the TOCs.
2	• BRT items captured.
3	• The documented outputs are Workshop Minutes; these are deemed to demonstrate the selection process for efficiencies with the routes; the process for integration with work banks and delivery; and the change control process. • Sharing has been undertaken with the Network Rail central team, finance, RAMs and senior operational staff disciplines in the route attending attended workshops held to hear local Route efficiency plans. • Efficiencies have been selected based on suitability for the South East Route and refined to be sure the Route is able to deliver them. • The efficiencies were provided to other routes such that they may select from this listing as appropriate.
4	• The main financial risk is the number of interdependencies and the accuracy of assumptions. • The use of previous outturn rate data is appropriate when the specifics of the saving are measurable. The removal of a defined activity which today has an actual contracted cost should provide an accurate reduction. However, many of the calculations for efficiencies are

Consideration	Notes of Meeting with Route
	not detailed enough to provide this assurance. • Access planning benefits are not a ground up estimate based on future working practice initiatives and are more about avoiding the costly recurring late access requests and repeat visits for multiple tasks and work sites which have driven up the schedule 4 costs per project. Estimates are based upon expert judgement. • The six key maintenance initiatives are in the planning and development stage with a rough order of magnitude costing informed by professional judgement. • Current analysis includes a bottom up review looking at re-structuring existing activities, staffing and methodologies and much of the cost savings are from headcount reductions or re-assignments.
5	• Change control is employed on efficiencies to keep the risk level and planned deliverability valid, particularly where planned efficiencies are linked to work bank planning and access requirements. • Initiatives are interlinked; and integration with the TOC's regarding access has been included in the planning of the live initiatives between June 2017 and today. • There are many interdependencies required for these reductions to be deliverable. Maintenance efficiency planning initiatives also need to happen to achieve the stated benefits. • Franchise change during CP6. • Dependency upon Victoria re-signalling being delivered to plan. • Top-down sense check "feels about right" based upon experience/judgement.
6	• Strong documented references back to fishbone. • BRT formulae for headwinds. • In addition to central guidance, applied Institute of Asset Management model to ensure coverage of business.
7	• High dependency on SCO for delivery of majority of commercial efficiencies, which major part of SE efficiencies target.

Wales

Consideration	Notes of Meeting with Route
1	
2	• BRT items captured.
3	• Renewals initiatives meetings between the Route Asset Managers have taken place and a listing of initiatives created and shared.
4	• New technology via electrification of the route drives a change in unit rates and ongoing maintenance activities. Some Headwinds are related to the new OLE infrastructure, the change to the existing system assets and how these will be treated. • CP6 costs are based on a business as usual approach. But with the potential for the divesting of the core valley lines during the control period a change request would need to be presented. • Efficiencies on frameworks are being derived from the use of localised small to medium (SME) suppliers which has had a positive effect on unit rates. Larger companies are deemed to have become more expensive as their work bank has developed. Local SME rates have been used to develop the CP6 work bank cost before the application of headwinds and efficiencies. • Most headwinds are route specific and calculated using a variety of methods from rate and quantity calculations through to allowances based on judgement. The general uncertainty range is deemed to be P50. • The Track calculations use local outturn rates not IP track in isolation. CP5 rates are 2016/17 where appropriate data exists. Rates have been reviewed against volumes and adjusted to allow for the real levels of activity. ABP is used in the route to provide detail for volume and resource requirements in maintenance.
5	• In house maintenance teams and training of staff in relation to new requirements within the OLE infrastructure is underway supported by the manufacturer of the OLE equipment. • A franchise change in October 2018 and the potential for the separation of the core valley lines to a new operator is providing a background of change to which a headwind is identified. • The route is clearing the outstanding backlog of maintenance works so that the efficiencies can be started based on a clear future work bank. • Each efficiency has an owner and due to the varying nature of the efficiencies different types

Consideration	Notes of Meeting with Route
	of ownership is required as the efficiencies evolve. • The team selected to deliver works and financial targets has been a success in the route since the devolution of multiple operators into one Welsh route. • The route is developing working efficiency behaviours and have high level plans for better performance. Reviews of CP5 lessons learnt have been undertaken with Infrastructure Projects and the supply chain. • A change process has been developed ready for CP6 governance requirements which links the owners of initiatives to the benefits management and reporting. Renewals efficiency tracking is captured and shared using a spreadsheet tool update which records the actual benefits level in actual cost against baseline or target. • Optimisation of access will exist in each of the asset groups with an efficiency target. Integration of maintenance and CAPEX project access requirements will be achieved through improved communication and working together to plan works with all parties involved.
6	• Central initiatives were reviewed by the route but no centrally imposed initiatives have been taken further. Integration with the Benefits Working Group, Change Portfolio Group, TOCs and IP supply chain has occurred. • The route has been involved in the track contact strategy and have assumed benefits from this when delivered in CP6 but there is a risk to this approach.
7	

Wessex

Consideration	Notes of Meeting with Route
1	• Lessons from CP5 have been captured and applied to future works. The review around previous inefficiencies has provided the initiatives and anticipated cost benefits. • Many CP6 efficiency calculations are bottom up and route specific, in lieu of centrally initiated plans. • Consciously not adopted central initiatives en-bloc. • Rostering – see opportunity but believe unrealisable in Wessex.

Consideration	Notes of Meeting with Route
2	• BRT items captured. • Headwinds assessment for Headcount presented.
3	• Participated in Benefits Working Group, Technical Asset Forums, Portfolio Working Group, CP6 efficiency workshops.
4	• The rates used to calculate the cost of the efficiencies are only partly derived from actual cost or existing contract rates. • Where an item can be calculated from recorded hours and rates currently being expended the forecast can be regarded as accurate and achievable. In other initiatives, the cost benefits are more a matter of professional judgement. • Rates used to calculate renewals track, signalling and E&P cost efficiencies are provided from IP Track outturn statements or IP Track contracts. • CAPEX: difficult to calculate financial impact; OPEX easier as it is largely based upon ABP. • Factoring down (e.g. OPEX multi-skilling) is judgement – SAY -50% and later delivery of benefit. • LEAN (based upon financial target) is targeting slightly higher run-rate than CP5. • Not all efficiencies deliver removal of cost from the business; some improve safety, reliability, etc. • Pitched values for efficiencies slightly pessimistic (based upon CP5 failures); aggressive in profiling (to target early wins); balanced with pragmatism = lots of judgement applied. • Efficiency impact of rail milling has been reduced by some re-railing.
5	• Each of the efficiencies has a plan and overall sponsor and larger initiatives have a project manager to manage the delivery stage of the initiative including integrating the stakeholders and managing the ongoing risk position. • The governance board has been set up to meet quarterly to review the progress of the efficiency initiatives and stretch the challenge with live challenge under RAG analysis. • The downstream stakeholders including the supply chain partners need to be ready to deliver their part, including and this process of engagement is managed by a change control process under control of the project manager. • Improved contracting strategy, stable work bank and improved access form the basis to the financial risk level. • S&C requirements included in the Track work bank will release an efficiency of delivery resource, increase the pipeline of works and provide for better quality and timing of delivery.

Consideration	Notes of Meeting with Route
	The management of the combined functions will provide better economy of scale. • Signalling anticipates savings through optimum access relating to the Feltham Re-Signalling which is the biggest single scheme in the regions £406m spend. The requirements for the access are agreed with the TOCs and efficient work planning is achievable. • A stable work bank and clear scope definition around the delivery of level crossing works and targeted signalling renewals create the bulk of anticipated efficiencies. • Signalling civils works are being taken out of main signalling contractor contracts and will be placed and managed directly with smaller tier supply chain partners and in house works delivery or minor works teams. • Atkins has won the signalling supply contract for the route and have bought new technology which has some synergy with digital railway. A new contracting strategy for major works is to award schemes using a staged approach in order to prove the technology. • Well established governance process in place. • Over-planning on maintenance (not on major CAPEX because that would block out key plant unnecessarily). • Big inefficiencies in CP5 (big signalling renewals failing – other schemes prioritised for key resources; incomplete commissioning; lots of snags).
6	• Some central guidance initiatives have already been delivered and are in the base costs so not included as efficiencies. • The route has undertaken a risk assessment of the central function initiatives to validate the achievability of these efficiencies in this route. • Acknowledged the difficulty in allocation of initiatives to fishbone categories.
7	• Tabulated STE opportunities with cash and non-cash benefit to Wessex. • Reliance upon IP Track for realising improved contracting strategy (contract for S&C combined with plain line).

Western

Consideration	Notes of Meeting with Route
1	• Integrated route wide engineering and access planning four weekly meetings are held to collate the individual route work banks and includes representation from the TOCs. • An access plan entitled 'One Plan' has been produced. Efficiency packaging for access planning maximising possession use and work sites is reducing the overall number of possessions required. Packaging of works by type within geographical boundaries reducing repeat visits and avoiding late request key access requirements. • The route has produced milestones plans which identify dependencies with other parts of the business. These will be maintained by a route change team. • Each efficiency has a plan on a page to manage and deliver the initiative. These are to be published three times in each financial year.
2	• BRT items captured. • Headwinds have a flat line profile (whereas efficiencies build over time).
3	• Participated in pan-Route working groups. Evidence in form of Minutes of Meeting of Civils Group. • Planning to maximise combined use of possessions for efficiency. This is contrary to view taken by Wessex whose experience is that this leads to conflicts between contractors and thus inefficiencies. So, although potential initiatives are shared, Routes may come to different conclusion based upon personal (not Route based) experience.
4	• The access cost benefits are calculated based on avoiding the impact costs of poor possession utilisation, planning and delivery. Cost calculations are based on previous schedule 4 and project operational contractor costs. • There is a reliance on the IP Track contracting strategy and rates. However, calculations have been assessed by looking at the CP5 outturn costs to date and undertaking a risk assessment to derive the common areas of impact; the cost of the risk is then added to the rates. • Some reduction in financial risk is derived from specific route smaller suppliers if the area of minor signalling and signalling civils. • The cost of CP6 maintenance interventions is derived from a combination of national and local route data and calculation. • Source of the rates and costing of efficiencies is contained in the Route Strategic Plan v7. Uncertainty analysis has been undertaken on the headwinds and efficiencies detailed as a

Consideration	Notes of Meeting with Route
	tolerance percentage. • Enterprise Risk Register includes risks on efficiencies. • IP have conducted assurance of efficiency costings.
5	• There will be a 12% increase in train mileage in CP6 which is linked to developing economic growth in the South West. • Route services, system operators and IP co-operation are to develop and deliver the work banks with a plan to engage early enough to deliver efficiency from the start of the control period. • The periodic business review includes delivery partners and a change process which revises benefits and risks for OPEX. This is underway now and provides updates of the financial risk. • Have recognised challenge to start to deliver efficiencies; therefore, plan is to build up level of efficiencies over the Control Period. • Enterprise Risk Register includes risks on efficiencies under CP6 Mobilisation item. • Many plan-on-a-page show low confidence in deliverability of efficiency. Stated that risk ranges on efficiencies (and spot) are informing Group Portfolio Fund (Route and National). • Pan-Route Working Groups challenged individual Routes on their targets. Evidence in form of Minutes of Meeting of Civils Group.
6	• The benefits working group facilitate the national position of efficiencies which provides a forum for benefits sharing which Western have been a part of, including adopting other route initiatives where possible. • The route has also been engaged with central guidance processes through contracts and procurement. • LEAN initiatives are mainly OPEX covering areas of Utilities expenditure and management which has now been devolved to the route.
7	• Intelligent Infrastructure guidance and costs have been extracted from the centre and no route developed numbers are provided. • Route Services Supply Chain Organisation is performing all of the actions for some specific efficiencies. In these cases Western have adopted the efficiency figures from the central SCO team. i.e. total dependency on central function.

Appendix 3 – Network Rail Level 2 Assurance Reports scoring criteria

Grade		Generic description of grade
5	Strong/very high	Strong capability and/or robust plans demonstrated in all important areas. Entirely fit for purpose. As best practice as can reasonably expected. No material issues. Strong evidence that risks are being appropriately managed.
4	Well placed/good	Well placed to address any gaps in capability, good evidence of plans – any gaps are identified and planned for. Generally fit for purpose. Demonstrates good practice. One or a small number of minor issues. Risks are being appropriately managed.
3	Development area/medium	Generally fit for purpose but capability and/or plans have one or more important but not critical issues. Development required to be seen as good practice. One or more important issues, and/or numerous minor issues. No critical issues. Incomplete evidence that risks are managed.

2	Urgent development/low	Not fit for purpose, with one or more critical issues requiring remedial action. Significant development required to be seen as good practice. One or more critical issues, and/or numerous important issues. Limited evidence of risks being managed.
1	Serious concerns/serious	Not fit for purpose, intervention required to address major gaps in plans and/or capability. Very significant development required to be seen as good practice. Multiple critical issues. Little or no evidence that risks are being managed. [N.B this grading should be used infrequently for more serious concerns.]
0	Not submitted	No submission made in this area.

Appendix 4 – Documentation Reviewed

We were afforded full access to the Network Rail SharePoint site "Strategic Business Plan Documentation Portal for the Periodic Review 2018" (Network Rail Collaboration > Planning & Regulation > Regulatory Compliance and Reporting > Strategic Business Plan) for the purposes of the review. This provided summary information and some supporting details.

Much of the detailed bottom-up analysis has been prepared by the Routes, the documentation for which is retained in the Routes. Consequently, it was necessary during Route meetings to request that Route level documentation be provided as evidence to support verbal statements. The table below lists the additional information provided by the Routes.

ID	Document
	ANGLIA
1	Anglia Maintenance Strategy
2	EF004 - II Opex Volume Benefits Calculator BRT Version
3	HW001, EF001 - SBP ABP - Access scenarios
4	Lean Experiments Benefits Master Tracker 16.02.18 WorkInProgress
5	Consolidated Backup for Opex Efficiencies
6	EF002 - LEAN Benefit CP5
7	EF003 - Impact of ESD - Isolations Contractor Spend
8	EF005 - Lease recalculation CP5
9	EF007 - Utilties Costs DL

ID	Document
10	EF010 - Headcount Impact of Y1 Org Restructure
11	HW002, EF009, EF011 - OPS CP6 Plan
12	HW003, HW004, EF008 - Supply Chain Operations HW for 1 Dec
13	HW005, HW006, HW007 - Backup for BRT Headwind flexes
14	IN001 - Loss of toilet income
	LNEEM
1	Slide deck presented at meeting with Route
2	Audit Trail Directory - RF11.xlsx
3	CP6_Signalling_Narrative_issue 1.8.pdf
4	Headwind and Efficiency Template - EARTHWORKS v7.xlsx
5	Headwind and Efficiency Template - STRUCTURES - 14.12.2017 v10.xlsx
6	LNE EM CP6 Cost Planning Review v12.pdf
7	Ref. Sig EM. 1.2 - Contract strategy v1.1 MR - DRAF....docx
8	Ref. Sig EM. 1.3 - project management and project pl....docx
9	Ref. Sig EM. 1.3 - signalling technology innovations....docx
10	Ref. Sig EM. 1.4 - Lean and SCI - v1.1 170816 LE_SS Draft.docx
11	1. CP6 Maintenance H&E HOM North RF11 Long List.xlsx
12	2. CP6 Maintenance H&E HOM South RF11 Long List.xlsx
13	3. CP6 Renewals Structures H&E Long List.xlsx
14	4. CP6 Renewals Drainage H&E Long List.xlsx
15	5. CP6 Renewals Earthworks H&E Long List.xlsx
16	6. CP6 Renewals Track H&E Long List (Analysis v17.1).xlsx
17	7. CP6 Renewals Buildings H&E Long List.xlsx
18	8. CP6 Renewals EM Track H&E Long List (Original list).xlsx

LNW	
1	Slide deck presented at meeting with Route
2	RF11 PLPR
3	LNW SBP CP6 Route Opex Template
Scotland	
1	Slide deck presented at meeting with Route
2	CP6 Headwinds and Efficiencies evidence ORR
3	CP6 Efficiencies working version 0.0
4	Scotland Route RF6 Route Strategic Plan draft V1.1 LMcQ comments
5	CP6 Efficiencies - brain dump
6	Standard POP format for each H and E
7	CP6 efficiencies and headwinds MAINT
8	SC Project Status Report Period 12
9	Route Track Renewals Governance Meeting WDT presentation P12
10	Route Services Track Governance pack P12
11	IP PlainLine Governance_Scotland_P 12
12	IP HO Scotland_Governance_meeting_P12 1718
13	1. Track Governance Action Tracker 13-03-18
14	Track Governance P12 financial summary
15	WD Civils Soft Report for period 12 March 2018
16	p12 IP B-C review
17	Civils Governance Meeting P12 financial summary
18	Sig and Power Governance Meeting finance P12
19	WD SIGEP Route Governance Period 12

20	SOFT Report _Period 12 SPC - J Spence
21	Master Action tracker - 120218 Update
22	IP Signalling Scotland Summary Report Period 12
South East	
1	Slide deck presented at meeting with Route
2	01 Sep Exec Briefing Pack Master_Final
3	12th May SE Route RSP Exec briefing Master 15-5-17A
4	Civils CP6 Efficiency and Headwinds Plan Aug 17
5	D29 CP6 SBP Headwinds and Efficiencies Summary v1.4
6	Headwinds and Efficiencies development and review Summary Final 13-03-18
7	Headwinds Efficiencies - Summary Workbook 20180301
8	P11 1718 F42 Scorecard - v1.0
Wales	
1	Slide deck presented at meeting with Route
2	Case Studys - Wales Route
3	II Opex Volume Benefits Calculator BRT Version
4	RF11 Efficiency Headwinds Summary consol
Wessex	
1	Slide deck presented at meeting with Route
2	P12 28.02.18_Programme_Board slides_decisions
Western	
1	Slide deck presented at meeting with Route
2	[7.7] Western route CP6 efficiency plan
3	Civils Asset Efficiency Group - Prep for tomorrow's (161117) teleconference

4	CP6 SBP Renewals Cost Assurance Report Final 260118
5	SBP CP6 Deliverability Assurance Report09FEBv2
6	Efficiencies pages from SBP planning meeting 1st Nov 2017
7	RE Civils Asset Efficiency Group - Prep for tomorrow's (161117) teleconference
8	RE Civils Asset Efficiency Group - Tele Con

Appendix 5 – Reporter mandate

Mandate for Independent Reporter Lot 4

Title	PR18 Review of Network Rail Efficiencies
Unique Mandate Reference Number	TBC
Date	19 December 2017 (XX January 2018?)
ORR Lot Lead	Sneha Patel
ORR lead for this inquiry	Graham Richards
Network Rail Lot Lead	Jon Haskins
Network Rail lead for this inquiry	Paul Marshall

Background

In Periodic Review 2018 (PR18) ORR will determine what Network Rail must deliver in Control Period 6 (CP6), the funding it requires for this, and the incentives needed to encourage effective performance and delivery. A key part of the PR18 process will be to review Network Rail's plans, as set out in its Strategic Business Plan (SBP), to determine whether it has a robust and comprehensive approach to identifying and delivering efficiencies that is reflected in the SBP. This will be an important factor in our assessment of whether the proposed efficiency challenges are strong but realistic. The findings are also likely to receive close scrutiny by industry stakeholders and funders (such as DfT and Transport Scotland).

ORR has determined that efficiencies will be considered within each of two main workstreams Opex (consisting of: Operations, Support & Maintenance) and Capex Renewals. ORR's approach recognises that asset managers and other subject experts have a key role in assessing efficiencies but it does not provide a completely systematic or focussed methodology for collating findings in this area. This

may not therefore offer the focus or detailed analysis which stakeholders expect. It is therefore proposed that the approach be modified to include use of an Independent Reporter study.

Purpose

To provide assurance to ORR as to the reasonableness of the efficiency and headwind elements of the Route Strategic Plans in the Strategic Business Plan, and the framework they have been produced within. ORR will use the outcome of this review to inform more specific risk-based analysis during the Periodic Review.

Scope

The reporter shall provide answers to the questions below:

- Is the efficiency and headwind framework in which the Routes have been asked to operate within a reasonable approach?
- Has each Route followed a reasonable process within the framework?
- Are the plans produced by each Route a reasonable outcome of the process undertaken?
- Have any factors been identified that merit further consideration, that might materially impact the route headwinds/efficiencies plans?

In developing its opinion the Independent Reporter should consider the following:

- The rationale and rigour of challenge for efficiencies that were:
  - identified for inclusion within the plan
  - identified but not included within the plan
- The rationale and rigour of challenge for headwinds that were:
  - identified for inclusion within the plan
  - identified but not included within the plan

- Sharing of initiatives and good practice between Routes
- The level of financial risk associated with each Route's approach
- The deliverability challenge of achieving any efficiencies included within the plan
- The application of any central guidance issued
- The role of central functions, such as STE, in the delivery of the Route's efficiency plans.

Timescales and deliverables

The required deliverables for this review are:

- Regular progress updates (frequency and format to be agreed when review commences).
- A presentation of findings, as set out in the timescales section below.
- Draft report submitted to ORR and Network Rail for review and comment.
- Final report submitted to ORR and Network Rail.

The report shall detail all findings and conclusions, and shall include a specific summary for each Route.

The report shall identify any areas where Network Rail's proposed efficiencies/headwinds/tailwinds are either over or under optimistic.

	Week commencing
Planning meeting with ORR and Network Rail	22 January 18
Presentation to ORR & NR: **Overview of draft report**	23 February 18
Draft report submitted to ORR and Network Rail for review	2 March 18
ORR and Network Rail return comments	9 March 18
Final report submitted to ORR and Network Rail	16 March 18

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