Independent Report

#28127 Part A – Review of Network Rail's contract management

Office of Rail and Road | Network Rail

15 July 2022

→ The Power of Commitment

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Appendices

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Abbreviation	Description
ACE	Agile Client Eastern
AFC	Actual Final Cost
AFP	Application for Payment
AMCO	Amalgamated Construction Limited
AOB	Any Other Business
ARM	Active Risk Manager
BAM	BAM Nuttall Limited
CE	Compensation Event
CEMAR	Contract Event Management and Reporting (software)
CFO	Chief Finance Officer
CoWD	Cost of Work Done
CPO	Chief Procurement Officer
ELT	Executive Leadership Team
ERI	Employer's Representative's Instruction
ETCS	European Train Control System
EV	Earned Value
EWN	Early Warning Notice
FTE	Full Time Equivalent
GBR	Great British Railways
GRIP	Governance for Railway Investment Projects
HV PSU	High Voltage Power Supply Upgrade
KPI	Key Performance Indicator
KR	Key Requirements
LL	Lessons Learned
LMD	Light Maintenance Depot
OJEU	Official Journal of the European Union
P11	Period 11
P13	Project 13
PMF	Procurement Management Framework
PO	Purchase Order
PPF	Putting Passengers First
QCRA	Quantitative Cost Risk Assessment
QRA	Quantitative Risk Assessment
QS	Quantity Surveying
RAG	Red, Amber, Green
RCDP	Renewals Collaborative Delivery Partnership
RICS	Royal Institute of Chartered Surveyors
RIDC	Rail Innovation & Development Centre
SME	Small and Medium-Sized Enterprise
SoW	Statement of Works
SPI	Schedule Performance Index
WCPSU	West Coast Power Supply Upgrade
WI	Works Information
WP3	Work Package 3

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1.   Summary

The Office of Rail and Road is seeking assurance of Network Rail's contract management capability. In relation to maintenance, renewals, and enhancement projects. In accordance with best practice and in a timely, efficient, and economic manner. The purpose of this review is to inform the 2023 Periodic Review (PR23). And ongoing monitoring of Network Rail's performance during Control Period 6 (CP6).

1.1   Context

Between 2018 and 2020, Network Rail undertook a transformation programme to change its approach to managing its Commercial and Procurement (C&P) activities. This, in combination with restructuring under the separate Putting Passengers First (PPF) initiative, has resulted in a unified approach to C&P activity which applies to supplies, services, and works related activities whether delivered centrally or locally by regional teams. The approach is defined in a Procurement Management Framework (PMF), and it applies to the Central Route Services team and to the five devolved regions. Route services acts as the professional lead for C&P activity and maintains the PMF.

To understand the effectiveness of these changes across delegated authorities, processes, and procedures our sampled quantitative survey required the completion of 51 questions centred around various aspects of projects This was then tested through qualitative responses. See our mandate and methodology.

1.2   Findings and recommendations

We acknowledge the journey made by Network Rail since the C&P transformation, and so we hope the report goes some way in identifying where capability can be strengthened leading into PR23. The Independent Reporter is aware of the improvements being made under the Capital Investment Capability Framework, but it is unclear as to what extent these will address the bespoke findings of this report. As such, the Independent Reporter proposes that the findings and recommendations are addressed in line with the on-going improvements programme.

KR1: Review the information that all Network Rail regions use to track contract performance

F1   Network Rail has recently implemented its Claims App (Microsoft Power App) which is bespoke to Network Rail.

F2   Despite this, the approach to tracking contract performance is inconsistent across the regions. The late adoption and recent shift to utilising CEMAR on all projects is likely to be a primary cause as to why Network Rail's performance tracking is not aligned within the regions themselves.

Policy aims versus contract performance

F3   Contract values are increasing. 49% of projects require re-authority and projects are finishing (on average) 30% over budget based on (an average) contingency of 12%.

F4   Contract and procurement policy is not dictating governance protocols. Almost one in five projects have commenced without successful completion of previous stage gates. In the Independent Reporters opinion this is a significant number and is contributing factor in the high rates of re-authority and overspend occurring on Network Rail projects.

F5   Tacit knowledge is lost. Two thirds of projects are suffering significant changes in internal resources. In the opinion of the Independent Reporter this is a significant factor in overspend and defence of claims as the tacit knowledge on the project is lost at alarming frequency.

F6 The Independent Reporter acknowledges the C&P route remit within the overall PMF system. The C&P policy that dictates contractual outcome is highly relevant to how the asset portfolio and investment governance is challenged. We note draw attention to F1.2 and F1.4 of the February 2021 review, and therefore conclude that Network Rail C&P policy outcomes are not materialising in the fashion intended. The 2021 review identified under F2.1 that "The PMF requires further development notably in the area of post contract management". Clarity in policy outcomes in line with the KPIs would be hugely beneficial to both the regulator and Network Rail in terms of the ability to track and understand post contract results.

ID	Recommendation
R1	C&P policy that dictates contracts should go further to incorporate the recommended KPIs and define what constitutes: – Value for money. – Efficient control. – Good practice and effective supplier relationships.

Assurance efficacy

F7 There is a contractual loop of risk not being appropriately managed or transferred, contingency not being sufficient, and submissions for additional funds. Less than one third of projects had a Quantitative Cost Risk Assessment (QCRA) validated contingency. The average amount of contingency across the portfolio is 12%.

F8 Data showed that applied average overspend versus the initial budget is 30% across Network Rail regions. Specifically, 23 projects (which incurred more than 100 contract variations) had on average a contingency value of just 8% at project outset.

F9 Network Rail's approach to budget setting appears to be inadequate, with 49% of the projects analysed requiring re-authority. The Independent Reporter questions the efficacy of the assurance regime in place which also relates to F1.3 of the February 2021.

ID	Recommendation
R2	Undertake a further review of how estimates and contingency are calculated at the outset (which should include a use of benchmarked data) and how project budgets and contingencies are set. This should investigate how budgets are allocated across projects, including the diversions of funds from smaller schemes to pay for re-authority requests, is important to identify the impact of ineffective budget setting beyond the monetary value.

F10 In the Independent Reporters opinion and experience, the Lines of Defence are not embedded appropriately despite this being previously cited in the 2021 February report, and a Commercial Assurance Group setup. We conclude that LoD2 & LoD3 requires further strengthening as the desired contractual outcomes are not materialising. It should be able to ascertain the extent to which there is systemic poor cost control, or whether it is a result of projects being proactively changed to generate overall portfolio efficiencies, or a mixture of both.

ID	Recommendation
R3	Commercial assurance should seek alignment (through changes to the assurance regime) between Network Rail and its contractor's regarding commercial contract administration. This inconsistency aligns with our findings that commercial teams do not play a prominent part of the lessons learnt process.

F11 Tacit knowledge lost is affecting commercial assurance. Network Rail interviews identified that claims were being settled at a higher rate than deemed accurate by the project team which in some instances is attributed to gaps in legacy knowledge at a project level. Defence of claims is being frustrated as the tacit knowledge on the project is lost at alarming frequency.

F12 The volume of contract change coupled with the finding that the current resourcing levels are insufficient has put pressure on individuals. Further reductions in the size of the Network Rail commercial teams are likely to lead towards a continuation or worsening of the trends found within this report and result in additional costs being incurred at a project level.

ID	Recommendation
R4	Identify at the appropriate organisational level (enterprise, region, or route) the risks posed by leaner commercial organisation in line with CP7 commercial strategies. This should have clear mitigations as to how Commercial teams will flex to meet workloads.

F13 The commercial value to maintenance works comes from the front end when agreeing the rates within the framework tenders. A more detailed review into the inconsistency across the commercial weighting may benefit regions by having a benchmarked approach that drives the best commercial outcomes. Whilst there is value to be gained in the post-contract commercial realm for maintenance, all respondents noted there is not sufficient resource in the commercial teams to extract this and there is little resilience to absence whether planned or not.

Contract administration, compliance, and change

F14 High levels of scope change throughout the life of the project have a material impact on the ability to effectively and efficiently contract manage.

F15 Highly competent and capable staff have cited productivity, home working and management changes, as key reasons for a highly challenging environment. Network Rail's own view is that they have the tools and processes in place alongside experienced, qualified, and trained resources to deliver projects, with the only drawback being that of the number of resources against the number of contracts.

F16 Network Rail interviews identified external politicised time pressures as an issue. This is the main driver for the number of projects commencing without a successful previous stage gate in place and were therefore not adequately prepared.

ID	Recommendation
R5	Review ECI protocols in line with the delegations of authority matrix. Programme timescales need to be better aligned with deliverables and the cost of extensions/delays weighed up with cost of post-contract changes because of lack of preparedness pre-contract. With relational style contracts under procurement in preparation for CP7, we recommend improving the quality and consistency of LoD1b assurance to align with the regional strategies. Consider making external assurance mandatory for high value / high risk transactions in line with Route Services' current practice.

F17 In the Independent Reporters view, decisions under the C&P governance framework are highly pressurised. The risks cited in the Short Form Strategy (SFS) for C&P (July 2020) have materialised and F1.4 of the February 2021 report has generally not been acknowledged.

F18 Early contractual decisions and time allowance to do make these are not adequate. The causes of scope changes and associated AFC increases include decisions made prior to project start, so for instance, allowance for the level of surveying to be done before project start (which is a risk versus cost trade off by the client), and the time allowed for the procurement process.

F19 It would appear based on the subsequent contract management challenges that these early decisions and processes often prove to be insufficient or inadequate, although further research would need to be done into the project management and investment governance to robustly assess this hypothesis.

Supply chain and handbooks

KR2: Review how Network Rail uses this information to instigate action to improve contract performance, both within a project lifecycle or as lessons learned for future projects.

F20   The Network Rail commercial handbook is broadly aligned with wider industry standards. The review found that the processes contained within the handbook are, where applicable, in line with the RICS Guidance Notes and no major deviations were identified.

ID	Recommendation
R6	We recommend key updates to all the Commercial handbooks in line with Section 5.5.5.

F21   In terms of F5.1 and F5.2 of the February 2021 report, The Commercial Handbook of the regions takes a more detailed and prescriptive approach to managing works contracts. The handbook does not differentiate between high or low value or risk contracts.

ID	Recommendation
R7	The commercial handbook would benefit from being broken down into a selection of bespoke, mandatory, guidance notes for specific situations/contracts rather than a catch-all reference document across regions as it is now.
R8	Implement R18 from the previous report noted as "provide a more prescriptive approach to the level of detail required when applying the PMF to transactions which are high value, complex or innovative. This could, for example, include a requirement for more explicit consideration of commercial, procurement and delivery risks at key points in the procurement lifecycle."

F22   Of the twenty Network Rail interviews undertaken, all but one was aware of the commercial handbook and where to find it. C&P Route Services are therefore inducting and creating awareness of the handbook as per the PMF.

F23   Nearly all projects undertook lessons learnt at the end of the project. These were in various formats, some included the main works contractors, however we found that most of the lessons did not go anywhere outside the core project group.

F24   Very few projects took lessons from previous projects into theirs at the outset unless it was part of a wider framework of similar projects. Necessary investigation is needed to establish if out-turn costs of previous projects are being used to benchmark estimates and budgets for new projects, and if so, whether the cost to Network Rail as opposed to the cost to the contractor is being used to inform these. Some projects undertook lessons learnt in the middle of a project or at the end of a certain stage, but this tended to be triggered by a particular issue rather than being a planned event.

F25   The Network Rail Commercial Handbook includes sections (2.7.2) for lessons learnt and advises that they should be undertaken at the project close out stage only. However, the commercial handbook does not provide any guidance about how lessons learnt should be embedded into the start-up of a project or provide how commercial team should feed into the process. This mirrors the findings that lessons learnt are not informing new projects and that the commercial team is not a key contributor to the process.

ID	Recommendation
R9	It is recommended outlining lessons learned requirements in the commercial handbook.

F26   The commercial handbook references the National Lessons Learnt HUB, however, none of the twenty project teams interviewed referenced capturing their lessons learnt within this application. Acknowledging that having stretched resources and that nearly all commercial staff are managing multiple projects, and therefore priorities change when moving to the next project, the lack of use of the system presents a fundamental issue with how lessons learnt are captured and utilised within Network Rail as a whole.

KR3: Identify any gaps or improvements in the information and process that all Network Rail regions use.

F27   Network Rail have systems to manage projects well. The commercial handbook details commercial processes. In the main, these align with RICS best practice. Yet in practice, there is evidence to suggest the processes are not followed. We find that with the inconsistency in KPIs (especially those which can be generated from CEMAR), there is potential that the systems and process are not being consistently applied.

ID	Recommendation
R10	A more detailed review of project administration and assurance data points is recommended to be undertaken on a narrower sample, to enable deeper insights and specific improvement measures to be designed and implemented

F28   Contractor interviews identified concern with Network Rail's ability to administer contracts in a timely fashion. Network Rail's own view is that they have the tools and processes in place alongside experienced, qualified, and trained resources to deliver projects, with the only drawback being that of the number of resources against the number of contracts.

ID	Recommendation
R11	In line with the CP7 strategies, undertake resourcing levels analysis in terms of a skills matrix. This will enable the establishment of a standardised commercial team composition based upon project value, risk, or complexity.

KR4: Review and benchmark regional performance in managing contracts.

F29   Project monitoring, data collection and KPI's are inconsistent across the regions. With devolution of regions and sporadic rollout of CEMAR inconsistency was not surprising. The level of inconsistency across regions and wider industry suggests this needs aligning.

F30   During review of the monitoring regime, differentiation between the below is important:

–   Data collected for consistent performance tracking.

–   Data collected for management purposes.

–   KPI data intended to drive individual contractor and Network Rail project performance.

ID	Recommendation
R12	Develop a project control workstream to review existing systems (CEMAR) in more detail. How the system is deployed across live projects. The data outputs it can generate. And how these are used to develop programme-wide outputs to track commercial performance.

F31   Common trends from the benchmarking were:

–   Cost forecasting accuracy.

–   Management of change (CEs, Timely submission of updated programmes).

F32   Programme milestone achievement Whilst cost forecast accuracy was the most consistent commercial KPI, definitions and measurement metrics varied across the schemes. KPIs relating to timeliness of certifications and payments were, surprisingly, largely absent across the schemes.

F33   Despite change management being a key area of commercial focus. It was low to absent across many of the schemes. The measures were not robust with few best practice examples to draw upon. This was a significant area identified during the interviews. And one for development alongside the use of CEMAR (see recommendations).

F34   Less than half of the schemes used schedule management (e.g. programme milestones/contract Key Dates) as a performance measure. A quarter measured timeliness of updated programme submissions. This did not feature strongly within existing KPIs or in interviews.

KR5: Recommend up to nine Key Performance Indicators (KPIs) to provide assurance to the ORR.

F35 If general performance data is captured periodically at project level, and collated to provide programme-wide insights, KPIs can then be used in a more focused and deliberate manner in areas to drive contractor and Network Rail behaviours in areas to improve performance and project outcomes. The following table presents a non-exhaustive list of recommended areas Network Rail should focus future attention to help address performance in those areas:

Table 1 Summary of KPI areas (source: GHD)

KPI No.	Targeted Area	KPI Titles
1	CoWD/Forecasting Accuracy	Forecast (£m) CoWD (£m) Period Accuracy Cumulative Period-on-period accuracy
2	Payments	Time to certify payment and make payment within contractual timescales
3	Accruals	Financial Accruals measured as proportion of COWD)
4	Risk	Measure of periodic exposure against budgets, Movement in periodic exposure, Level of mitigation and reduction
5	Programme	Completion against key dates and programme milestone dates which occur during the relevant contract year
6	Change Management	Number and value of changes Timeliness of communications within contract timescales Changes submitted vs rejected, % Difference between original submitted value by contractor and final settlement amount of change
7	Claims	Gross Claim Value/Network Rail View/Certified Amount

ID	Recommendation
R13	It is recommended that consolidating, refining, and enhancing the cost, procurement, programme, time and contract administration and compliance category KPIs should be considered.

F36 Recognising that not all projects will be of value or complexity enough to warrant all KPIs monitored against them, a tiered approach to the number of KPIs utilised on a project based on a RAG rating matrix concerning both value and complexity of the project may be appropriate.

F37 Less than half of the schemes used schedule management as a performance measure. A quarter measured timeliness of updated programme submissions. This element did not feature within existing KPIs or in interviews.

ID	Recommendation
R14	The review outlines proposals for a new suite of KPI measures. These need to be assessed by Network rail and implemented where applicable. Consideration should be given for implementation of these and their impact on behaviour. Involvement of external advisors to help the rollout of new KPI's may be beneficial.

KR6: What range of efficiency savings (or efficiencies) are possible if best (benchmarked) practice is obtained?

F38 The findings of the report are not at a level of detail which can extract potential efficiency savings as a value or percentage.

2.   Introduction

2.1   Purpose of this report

The purpose of this report is to assess Network Rail's contract management capability within all regions including both major and minor works. As per the Statement of Works (SoW), this report provides an independent opinion on the Key Requirements (KRs).

2.2   Review background

The PMF has been designed as a universal system for Network Rail. It is intended to define the approach to be taken by route services and the five regional organisations across all types of C&P activity from goods and services to complex infrastructure enhancement works. The PMF covers the whole procurement lifecycle and defines the environment that Network Rail's C&P processes are undertaken.

A previous review of procurement strategy, under the Independent Reporter (IR) framework was carried out in February 2021. This is referred to as the February 2021 report throughout this document. The study reviewed Network Rail's Procurement Management Framework (PMF) and examined the effectiveness and maturity of the Commercial and Procurement (C&P) processes and how they compare to best practice[1]. This primarily focussed on the PMF's processes and procedures following the C&P transformation programme in early 2020. Network Rail has implemented several improvements to date including revising C&P handbooks.

The reader should note that this is part of two reports:

–   Part A is a review to assess contract management capability within all regions (including both major and minor works) beyond those areas examined in the February 2021 report. Part A is to provide the Office of Rail and Road with assurance of Network Rails capability to manage contacts relating to renewals, enhancements, and maintenance.

–   Part B is a review of the proposed CP7 strategies. Part B sought to review the development of Network Rail's regional Control Period 7 (CP7) strategies, as well as consider the potential impact across a variety of intertwining themes. These include Small to Medium Enterprises (SMEs), innovation, efficiency, the potential risk introduced finally, the degree of change required to implement these models.

2.3   Reporter's mandate and scope

Part A considers the results and outcomes delivered by Network Rail at a working level following the February 2021 report.

In Part A of the review, the Office of Rail and Road is seeking assurance of Network Rail's capability to manage contracts relating to maintenance, renewals, and enhancements projects in accordance with best practice and in a timely, efficient, and economical manner.

The objective of this review is to inform the 2023 Periodic Review (PR23) and Office of Rail and Road ongoing monitoring of Network Rail's performance during CP6. The review will include a performance baseline for Office of Rail and Road to understand the current results and outcomes and allow Office of Rail and Road to measure the changes produced by the ongoing improvement programmes associated with the C&P Independent Review undertaken in February 2021.

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[1] Following this report, Network Rail implemented several improvements to date with several improvement programmes ongoing, including revising C&P handbooks.

2.4   Methodology

The agreed methodology between the Independent Reporter, the Office of Rail and Road and Network Rail was to facilitate a two-phase approach to the report:

–   Phase 1: Quantitative survey of 100+ projects from the Network Rail regions.

–   Phase 2 (a): Qualitative interviews with Network Rail of 20 of the projects surveyed within phase 1.

–   Phase 2 (b): Qualitative interviews with main works contractors from ten of the projects interviewed within Phase 2 (a).

Data obtained from phases 1 and 2 was then analysed and the findings produced. The Independent Reporter has also undertaken the following activities:

–   Comparison of the Network Rail commercial handbook against Royal Institute of Chartered Surveyors (RICS) Black Book's best practice.

–   Review of commercial management of maintenance activities within Network Rail.

–   Review of the Network Rail regions' current Key Performance Index (KPI) tracking.

2.4.1   Phase 1: Sampling and quantitative data

To understand the effectiveness of the C&P transformation, and subsequent C&P transformation across delegated authorities, processes, and procedures our sampled quantitative survey required the completion of 51 questions centred around various aspects of projects. The purpose of splitting the survey questions into multiple sections is to pre-structure the data to enable trends to be discovered more easily and grouped more efficiently.

The questionnaire had several trigger questions that were purposefully leaned towards producing negative outcomes. These were around the number of variations, whether claims were experienced on the project and if delay damages were levied. In receiving data against these trigger questions, it subsequently allowed one to analyse the other sections of the questionnaire, such as procurement and contract strategy, to establish if there any cross-region trends as to why these issues may occur.
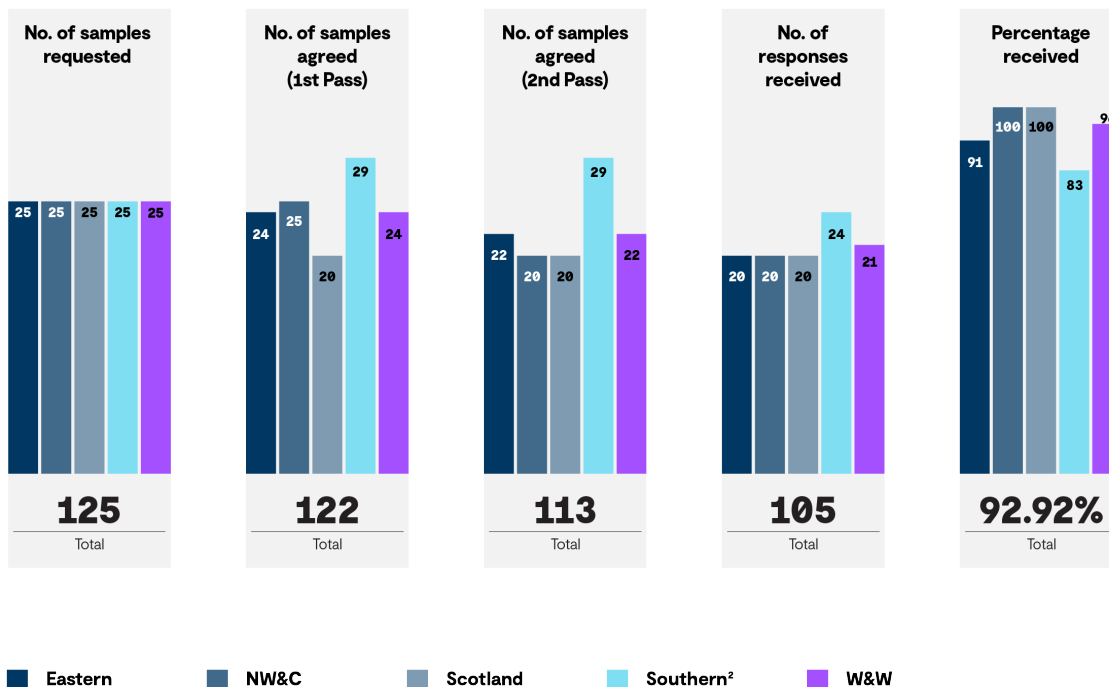
Figure 1 Sample response rate per region[2] (source: GHD sample categories)

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[2] Southern has the lowest percentage received, however, it also has highest number of actual submissions.

How did we agree the sampling?

The following sampling parameters were agreed.

Table 2 Sampling parameters (source: GHD sample parameters)

Title	Description
20 to 25 projects per region	To get value from quantitative analysis, a sample must be large enough to ensure trends can be identified without letting individual extremes skew said trends. A selection of 100 to 125 projects is sufficient to meet this criterion.
From within CP6	Utilising a selection of projects from the most recent funding window increases the likelihood of the project knowledge being still within the business, and 'fresh in the minds' of the individuals who took part in the project. This provides the best opportunity to have quality data to analyse, as opposed to having knowledge gaps or a lack of clarity.
Mature (GRIPs 5 to 8) or completed projects	Post contract commercial performance and capability is at its most demonstrative within the construction phase and so selecting projects within these phases ensures that the data is analysed with an apples-for-apples approach as opposed to contrasting commercial performance within the construction phase compared to the feasibility and design stages. Furthermore, analysis of final account performance can only be undertaken on projects that are complete.
Value predominantly between £10m-£30m	Larger value, more complex projects have a greater likelihood of requiring more detailed commercial management than low value, low complexity projects. Ensuring the projects are of a value where commercial management is a prominent contributor to the success of the project allows for a more detailed assessment of this within the phase two qualitative stage.
50% of the sample to have claims/large numbers of variations	Projects which have external claims, or a large amount of change, increases the likelihood that commercial practice has been required to be a prominent part of the execution of the project and, therefore, ensures the evaluation of this in the phase two qualitative stage yields better quality data.

First pass sample

It was notable following receipt of the work banks, that their form and level of detail varied from region to region. The table below illustrates the gaps within the initial work bank data provided against the selection criteria:

Table 3 Regional project work bank comparison (source: Network Rail regional workbanks data)

Region	Document Title	Contract Specific	CP/Dates Specified	GRIP Stage	Value	Variations/ Claims
Eastern	– Project List – Claim Register	✖	✔	✔	✔	✔
North West Central	– Claim input North West & Central Sample P11 – North West & Central – Commitments – Copy of Settlements	✔	✔	✖	✔	✔
Scotland	– Project Budgets Tracker	✔	✔	✔	✔	✔
Southern	– Southern Claim Input – Southern CP6 Projects – Purchase Orders v1	✔	✔	✔	✔	✔
Wales & Western	– CP6 Contracts Commitments –CP6 Contract List – CP6 Contracts Commitments - CP6 Claims – Settled	✔	✔	✖	✔	✔

Second pass sample

A variety of issues were raised that reduced the sample size in the first pass. These included:

– the project selected is a supply contract;

– the project selected is a maintenance project;

– the project is within GRIP stages 1 to 3;

– the project could not be found, and

– the person(s) with the knowledge of that project has moved on.

Whilst this was only related to nine out of the 122 first pass agreed projects (7%), this, combined with the issues faced above suggests there are potential issues with how projects (both live and complete) information is managed at a regional level. This was considered when reviewing the KPIs.

The final agreed sample was as per the below quantum.

Figure 2 Agreed quantitative sample per region (source: GHD)

No. of samples requested

125

No. of samples agreed (1st Pass)

122

No. of samples agreed (2nd Pass)

113

| Eastern | NW&C | Scotland | Southern | W&W |
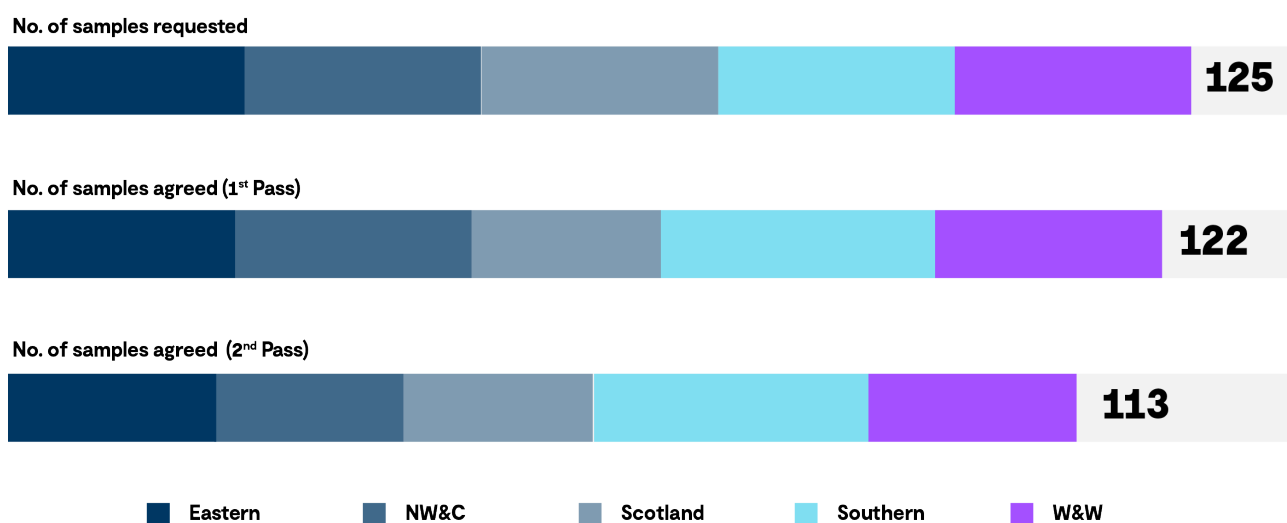
2.4.2   Phase 2: Interviews and qualitative responses

The wide range of transaction types, values and complexity of procurement undertaken by Network Rail makes it impractical for a single system of universal application to prescribe what should be done in all circumstances. As a result, the overall C&P system, as defined by the PMF, relies significantly on elements such as the competence of practitioners using it and the effective application of governance and assurance.

The purpose of the interviews was to investigate commercial practices at a deeper level, beyond the survey data. The interviews were designed to gain detailed insights into how projects are managed commercially, including an understanding of the successes and pitfalls experienced by the project teams and identify areas for improvement.

Network Rail

The interviews were designed to gain detailed insights into how projects are managed commercially, including an understanding of the successes and pitfalls experienced and identify areas for improvement. Interviews were conducted with a selection of project teams from the Network Rail portfolio. In total, of the 105 number of participant projects identified, twenty were interviewed as part of this phase.

Projects were selected based on the findings within the phase one data sample. Due to the qualitative nature of responses in phase 2, analysis and challenge was undertaken through a series of iterative forward and back 'passes' identified in the data sets, with a focus on understanding trends across the entire data set.

Table 4 Qualitative methodology (source: GHD)

Pass phase	Approach	Purpose
First pass	Collating answers for each standard identified question from a selection of interviews.	Centralised collation of data; themes begin to emerge.
Second pass	Answers begin to be categorised in line with the emerging themes. Remaining proportion of interviews are added to the centralised data, being analysed with the identified categories and themes.	Condensing data into manageable set; themes are formed.
Third pass	Key themes are grouped, and quantitative analysis incorporated. Qualitative analysis of residual findings which do not lend to quantitative analysis.	Presentation of key findings quantitatively. Significant qualitative findings are identified.

Supply chain

Network Rail has an extensive supply chain network that delivers a broad range of supplies, services and works. To deliver each transaction efficiently to a high professional standard, competent practitioners should be supported by robust C&P processes, assurance, and governance within an overall C&P operational model.

The purpose of undertaking interviews with the Network Rail's supply chain partners was to capture 360° feedback on the projects, providing a supply chain perspective on how the project was delivered and managed from a commercial and contractual point of view. This additional insight would complement, validate, and enable comparisons with the information gathered from the Network Rail commercial teams' interviews.

Ten contractor teams were intended to be interviewed as part of this phase, with nine were conducted. Project selection was informed by contract value and contract type to ensure a range of different project characteristics were included.

2.4.3   Phase 3: Review and analysis

Review and analysis

As part of the review, we have sought to understand how Network Rail uses information to instigate action and whether it drives contractual performance, both within a project lifecycle or as lessons learned for future projects. We have sought to identify any gaps or improvements in the information and process that all Network Rail regions use to manage contracts. This is based on the expertise of the Independent Reporter and RICS/ICES best practice.

We have also reviewed and benchmark regional performance in managing contracts for renewals and enhancements delivered by Network Rail against other UK and EU infrastructure managers and have recommended up to nine Key Performance Indicators (KPIs) to provide assurance to the Office of Rail and Road that Network Rail is managing contracts for renewals and enhancements in an efficient and economical manner.

Commercial handbook

The Commercial Handbook (version V1.12 – April 2020) serves as a support manual for business-as-usual commercial activities within Network Rail. It is a reference document and therefore not a mandatory baseline for the performance of commercial activities.

A review on the following sections below were deemed key to the post-contract administration of projects.

Table 5 Sections key to post-contract administration of projects (source: Network Rail regional handbooks)

Section	Topic
Section 2.3	Contract Management
Section 2.4	Internal Reporting
Section 2.5	Payments & Certificates
Section 2.6	Change Management

Comparisons were made against the RICS Black Book Guidance series. The following up-to-date Guidance Notes (GN) formed the basis of the review.

Table 6 Guidance notes (source: Network Rail regional handbooks)

Guidance Note	Date
Commercial management of construction 1st edition	March 2010
Change Control and Management, 1st edition	January 2021
Interim valuations and payment, 1st edition	August 2015
Valuing change, 1st edition	May 2010
UK Cost reporting, 1st edition	March 2015
Cash Flow Forecasting, 1st edition	December 2012
Final Account Procedures, 1st edition	December 2015
Conflict avoidance and dispute resolution in construction, 1st edition	April 2012
Extensions of time, 1st edition	November 2014
Termination of contract, corporate recovery and insolvency, 1st edition	June 2013

KPI regime

Part of establishing Network Rail's contract management capability is assessing the quality of the Key Performance Indicators (KPIs) utilised within the organisation. To determine this, the Independent Reporter has first compared the regions' KPIs against each other, and then a subsequent comparison against 12 infrastructure providers based in the following sectors, to provide a holistic picture of Network Rail's current monitoring regime and highlighting areas for improvement. These included:

–   High speed rail
–   Light rail/metro
–   Water
–   Nuclear
–   Environment

See 3.3.2 for benchmark data of KPIs from 12 similar large infrastructure organisations and major schemes within these was gathered to provide comparative data to the current Network Rail position.

See 3.3.3 for recommended KPIs.

3.   Review Areas

3.1   Contract management capability

3.1.1   Introduction

Part A considers the results and outcomes delivered by Network Rail at a working level following the February 2021 report as C&P is expected to play an important role in terms of the development of the 2023 Periodic Review (PR23) and SBP submissions for CP7. The PMF has been designed as a universal system for Network Rail, it is intended to define the approach to be taken by Route Services and the five regional organisations across all types of C&P activity from goods and services to complex infrastructure enhancement works. The PMF covers the whole procurement lifecycle and defines the environment within which Network Rail's C&P processes are undertaken.

Over twenty-five recommendations were made in the 2021 February report. We explore the results and outcomes at a working level in the preceding sections.

3.1.2   Policy aims versus contract performance

Policy is a deliberate system of guidelines to guide decisions to achieve rational outcomes. The PMF comprises Network Rail's C&P policy and a suite of supporting documented procedures, guides, templates, and tools. The contracts & procurement policy covers all goods, services, and works procured and delivered by Network Rail. The policy mandates the use of the PMF and describes ten principles to be applied with the aim of delivering:

– Value for money.
– Efficient control.
– Standard arrangements based on good practice and effective supplier relationships.

Value for money?

Of the 47 projects (45% of all surveyed) which provided an awarded contract value[3] and a final account figure, contract award values increased by almost 50% across the duration of the project.
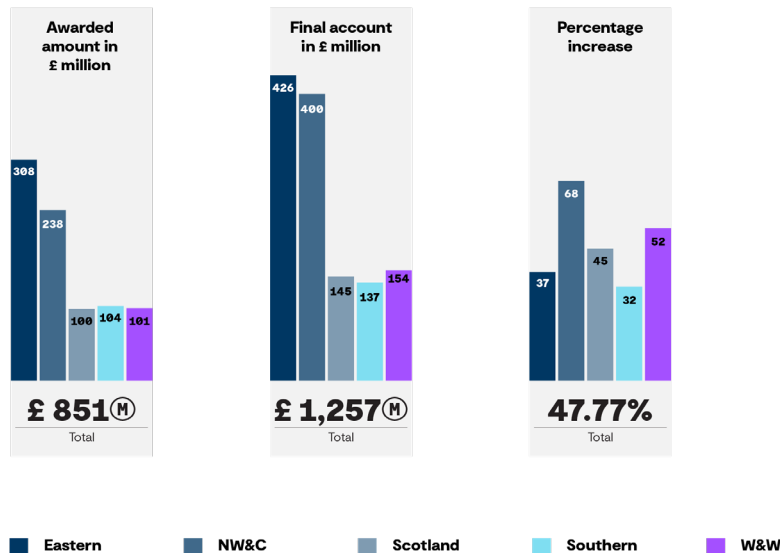
Figure 3 Final account vs contract award (source GHD quantitative survey responses)

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[3] There were inconsistencies in the data submitted by Eastern Region with some projects reporting a budget but not an awarded contract value amount and others reporting an awarded contract value but no budget, hence the discrepancy in final account values in Figure 3 and Figure 10.

Efficient control?

Almost one fifth (18%) of projects sampled had not successfully passed the previous stage gate prior to commencement of the next stage, mainly the construction gate. We note that three of the five regions experience this at a rate of 1 in 3 of the associated projects.
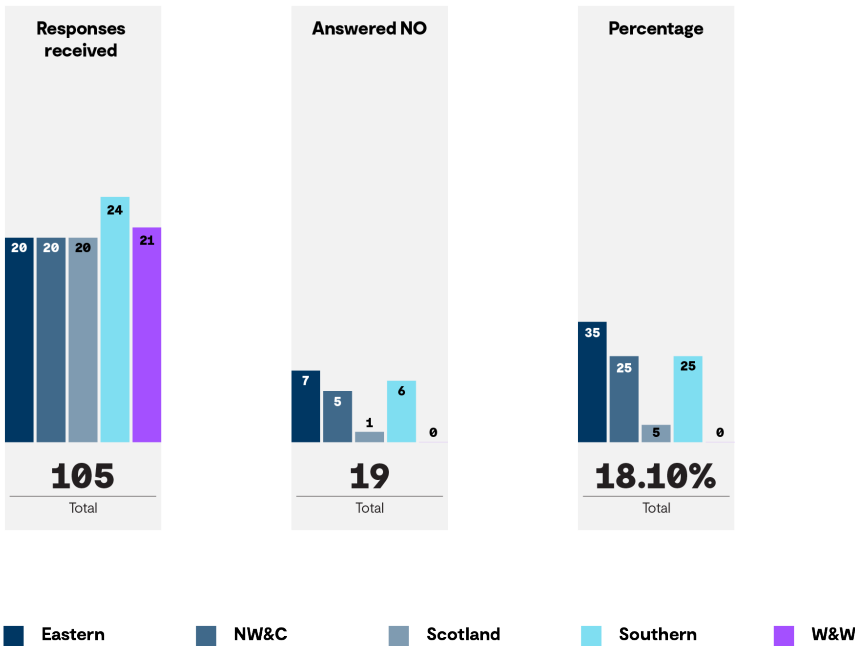
Figure 4 Successful prior stage gate percentage (source: Network Rail quantitative contract data)

Standard arrangements based on good practice and effective supplier relationships?

65% of respondents found that their project had experienced significant change in the Network Rail project team. With two of the five regions experiencing this at a rate of between 80% and 90%.
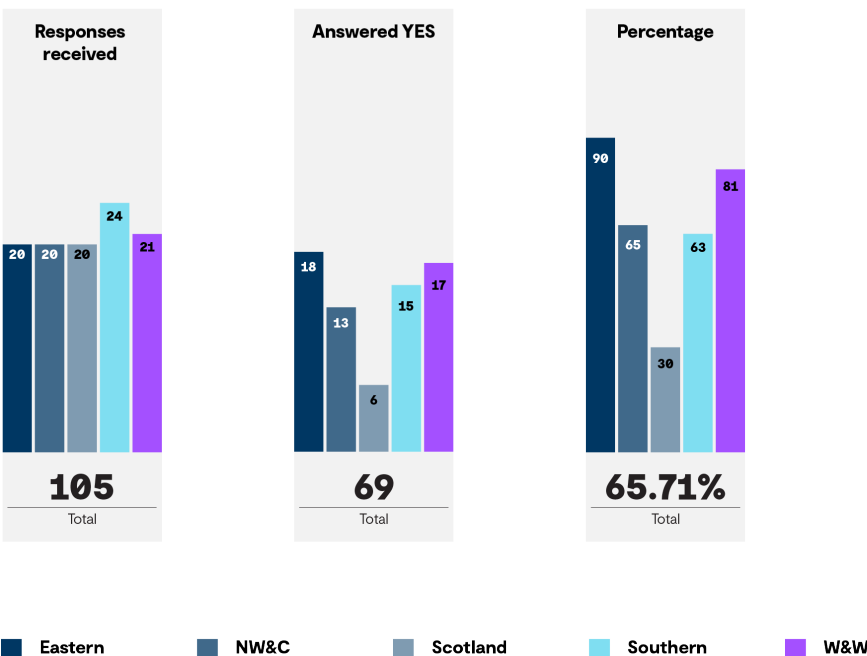
Figure 5 Significant resource changes percentage (source: Network Rail qualitative survey responses)

3.1.3   Assurance efficacy

An area reviewed by the February 2021 report was "How governance and assurance is used to achieve a balance between risk and pace of delivery, and to support more efficient and effective procurement strategies and decisions, which deliver best value for money outcomes". Under the PMF, assurance is intended to reduce commercial risk by verifying that outputs have received adequate oversight ahead of governance decisions. Assurance is described as having six objectives:

– Ensure alignment to Network Rail strategies, policies, and procedures.

– Respect all applicable standards, regulations, and obligations.

– Increase confidence in procurement activity throughout the lifecycle.

– Identify and address risks and issues that may impact on value for money.

– "Best practice" and consistency across procurement activities.

– Aligning activities with category and sourcing strategies.

Within the PMF, governance and assurance activities are focused on major decision or commitment points, and these are predominately aligned with delegated powers with the focus on category management and sourcing. We note the regional commercial handbooks assurance is based on three lines of defence. These are:

1. LoD1: assurance of specific project transactions.

2. LoD2: assurance by functional units for example, regional C&P teams.

3. LoD3: specific reviews undertaken by Network Rail's internal audit function.

Governance and assurance procedures are central to the concept of the PMF and to effective delivery through the C&P operational model. The following strands below were noted during our review.

Risk, contingency, re-authority

Less than half (46%) the projects utilised a Quantitative Cost Risk Assessment (QCRA)[4] to establish their contingency figure, and this reduces further to approximately 30% for those projects that used the QCRA output within their cost plans.
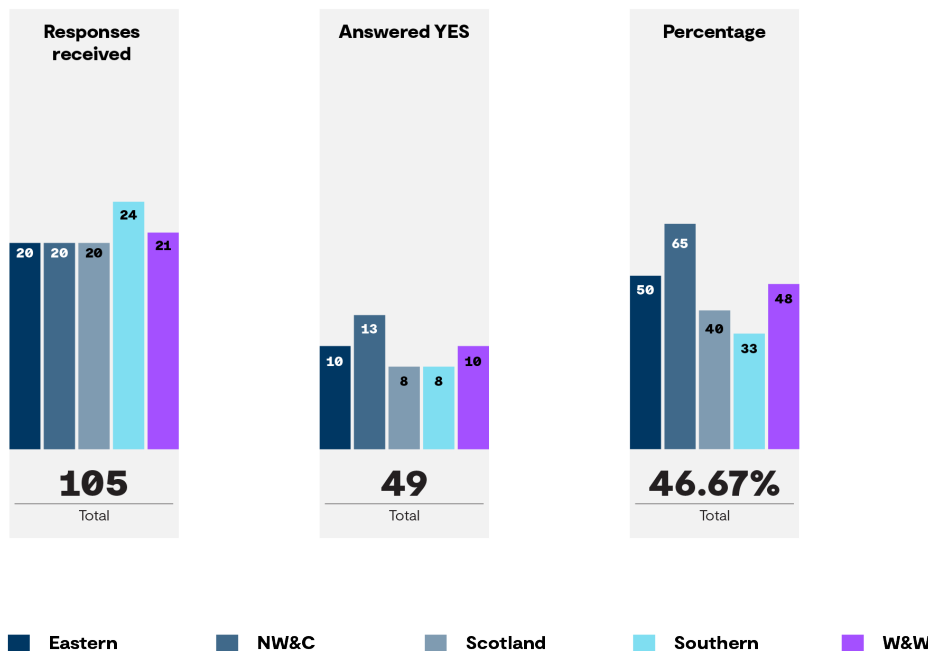
Figure 6 QCRA use when calculating project contingency (source: Network Rail quantitative contract data)

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[4] The purpose of a Quantitative Cost Risk Analysis (QCRA) is to estimate an appropriate level of cost contingency to supplement the project estimate and provide confidence that the budgetary allowance will not be surpassed. A fully quantified risk register is essential to undertake the Cost Risk Analysis for the projects within the sample (typically £10m-£30m in value).

The lack of utilising a QCRA to calculate the contingency amounts for project may explain why the average contingency percentage against the value of the works contract was only 12%. This figure is concerning given that 66% of projects were design and build, 51% were target cost, and 32% of projects were issued to the market at GRIP stage 3, in each of these scenarios market norms would expect a higher value (>25%).
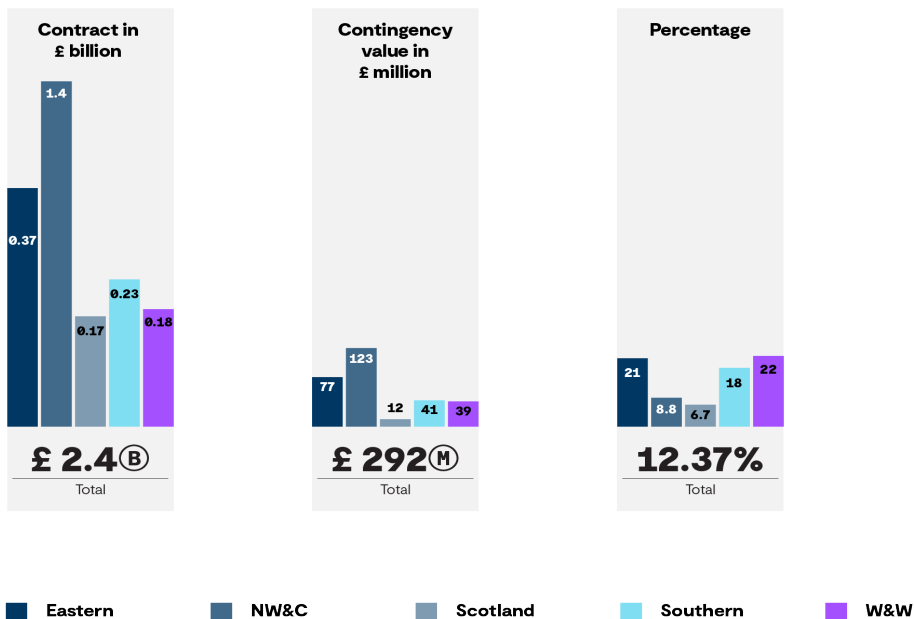
Figure 7 Contingency as a percentage of awarded contract value (source: Network Rail quantitative contract data)

This insufficient contingency percentage is reflected in the rate at which projects are having to seek financial re-authority, which is almost one in every two projects (49%). The evidence does not expressly show why re-authority is required at such a high rate, but the insufficient contingency is clearly identified as a factor related to this, alongside poorly defined scope, and upfront preparation for the project.
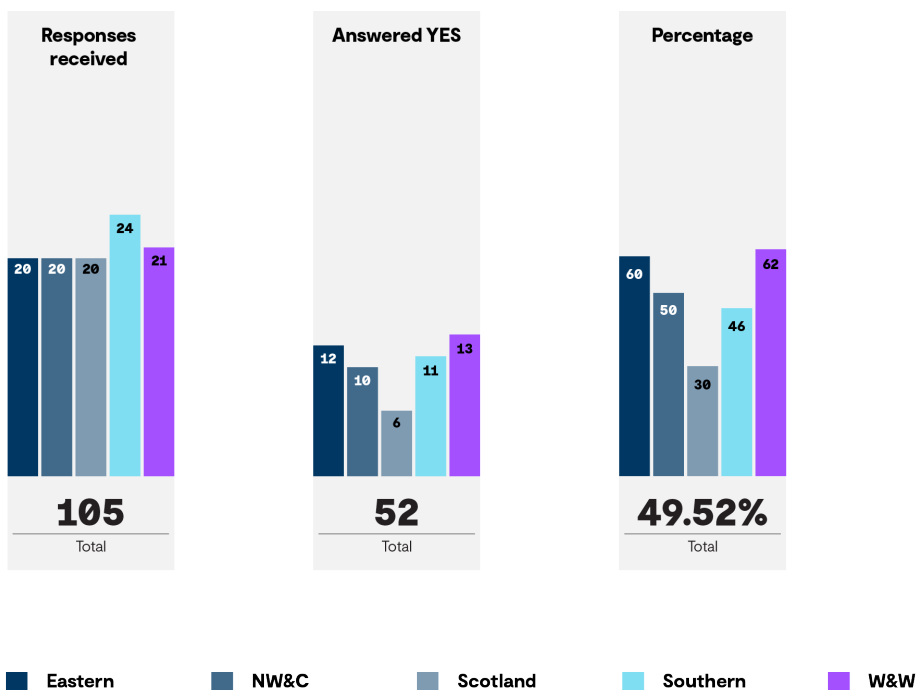
Figure 8 Project re-authority rate (source: Network Rail quantitative contract data)

Claims

We analysed the 49 projects with associated claims from contractors (47% of all surveyed). On these projects, almost 63% of their entire contingency is utilised to settle claims. This leaves only 37% of the original contingency allocation for risk mitigatory factors and action plans. This is exacerbated in two of the five regions, with one region utilising over 85% of their contingency on claims and the other expending more than their contingency on claims alone.
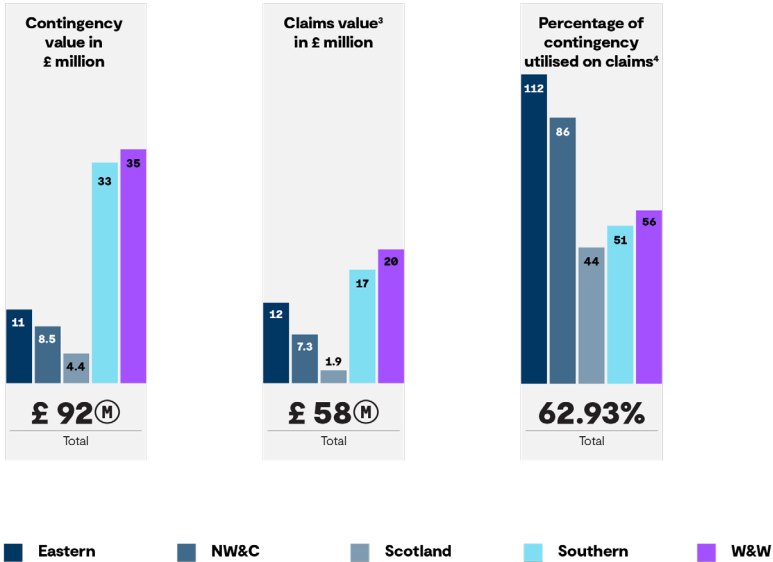
Figure 9 Percentage of contingency utilised on claims[5][6] (source: Network Rail quantitative contract data)

Overall, the issues regarding contingency are shown best when considering the final account value of the 46 projects (44% of all surveyed) which had provided both a final account value and an initial budget. Within this selection, four out of the five regions' projects are breaching their budget (which includes contingency) by a factor of 25 to under 30% .
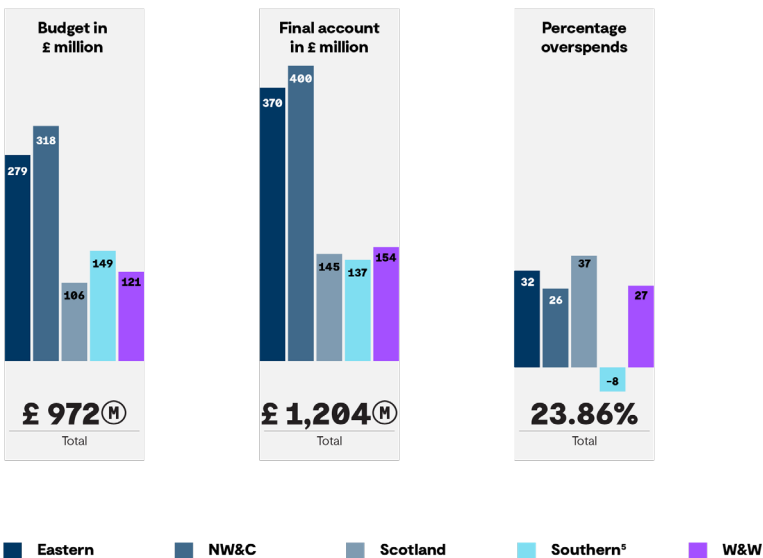
Figure 10 Final account vs budget[7] (source GHD quantitative survey responses)

Maintenance

The maintenance operations are typically commercially led from a route perspective as opposed to a region perspective. As part of this report, a representative from at least one route within each of the five regions was interviewed. This resulted in interviewing one Head of Commercial, one Programme Commercial Manager and three Senior Commercial Managers.

There was a consensus across all five respondents that the commercial management of maintenance works is typically a turn-key style arrangement, as most of the rates and activity costs are agreed as part of the framework, as opposed to a more dynamic commercial management approach as found within capital expenditure projects. This is as expected, in the Independent Reporters opinion, and broadly aligns with other comparative infrastructure organisations approaches to maintenance, from a contractual perspective.

The commercial value part of maintenance operations is found within the framework procurement period where executing the right commercial models and weightings produce the best outcome for Network Rail over the length of those frameworks.

There is value in of applications for payments and monitoring the maintenance works in the post-contract maintenance realm. All five respondents stated that there is insufficient resource within their teams to allow themselves to operate at the level they would like to with the following statements emphasising this:

– "Difficult to manage all requirements."
– "Short on admin support and no resilience in the team."
– "Not resourced adequately."
– "Team is insufficient in size and therefore have to pick your battles."
– "We only have the resources to do the minimum that is required to be compliant."

All five respondents said that the commercial team were generally involved in the procurement of the maintenance frameworks, less so at a national level. Notably, there was inconsistency across all five regions regarding the commercial weighting within those tender evaluations.

Each respondent stated that the commercial weighting varied per framework based on its complexity, however, the respondents had a differing stance on the 'normal' practice for the split with them spread in 10% increments from 70/30 in favour of commercial criteria, down to 70/30 in favour of technical criteria.

Further investigation would be required to establish if there are certain outputs, whether operationally or commercially, based on how the framework was commercially weighted. As a result, it may be beneficial to cross-examine how each region weighted certain regional frameworks (that are required across all regions) to establish potential inconsistencies and examine the effect of those.

When asked what maintenance organisations does well, the following responses were received:

– Management of significant number of stakeholders.
– Planned maintenance is delivered effectively.
– Input into regional frameworks ensures they are more likely to be fit for purpose for that regions' needs.

When asked what maintenance organisations could do better, the following responses were received:

– Managing reactive maintenance efficiently.
– Systems improvements for better monitoring and efficiencies – such as Power BI.
– Need to aggregate demand better.
– Co-ordination of route frameworks and their expiry/handover.
– Plan better logistically in remote areas (due to lack of resources available).

3.1.4   Contract administration, compliance, and change

Decision making forms the primary purpose of governance. Commercial and procurement governance provides a framework for C&P activities including the management of works contracts. This is based on four principles:

–   Efficient and lean governance.

–   Light documentation.

–   Effective use of delegation of authority.

–   Governance related to contract value and risk.

The purpose of the interviews was to investigate commercial practices at a deeper level, beyond the quantitative data. The interviews were designed to gain detailed insights to how projects are managed and governed commercially, including an understanding of the successes and pitfalls experienced by the project teams and identify areas for improvement. Network Rail has produced a Short Form Strategy (SFS) for C&P (July 2020). The SFS describes a vision based on 'strategic value management' which is underpinned by three pillars: route business requirements, integrated category strategies and supplier segmentation. The SFS indicates that this approach will be supported by fit for purpose systems and processes and will respect relevant governance and assurance requirements. It noted that performance will be indicated by route aligned metrics and delivered using a 'best people' approach to develop core skills. The SFS identified two amber rated risks:

–   "Failure to deliver assurance of supply, highest quality and service standards or value for money".

–   "Ineffective contract, supplier & supply chain management, failing to drive out value for money or not meeting business needs or commercial obligations".

–   The following strands below were noted during our review.

Change control

We identified through the interviews with project resources, that high volumes of change are a key issue. We explored this further during our review as causes of contractual change can be wide ranging:

–   The regional teams cited challenging, politically driven, timescales as a key reason for contractual changes.

–   We note that unrealistic project schedules are a response to this.

–   Productivity was also identified as a key area affecting contract capability, where on approximately half of the projects it was an issue. The teams pointed to Covid-19, resource availability, resource consistency and rail access.

–   A further stated issue amongst most surveyed respondents was a lack of contractual preparation related to scope where limited surveys, frustrated pricing agreement and limited contract set up, led to post-contract changes. Several respondents noted that contracts were let with incomplete design for which Network Rail took on the risk.

–   Of the respondents who stated they had issues with third parties, there was overlap with a lack of upfront preparation regarding design and surveys. Almost half of the project teams stated that third-party interfaces caused change and/or delays.

–   Finally, cited issues included possession planning, where they said that insufficient planning in the T-Minus process was the main reason for change.

Figure 12 summarises these reasons for the high volume of change.

Managing the contract

Most respondents stated Network Rail were proactive and pragmatic in dealing with issues. Some respondents found the level of support to be challenging, especially in relation to seeking authorisation for changes. Figure 13 indicates the perceived support provided by Network Rail across the projects when raising and managing issues.

Figure 14 below reflects the main areas of improvement for Network Rail, as stated in the interviews:

–   The most common areas for improvement were resourcing and management of change. Resources were consistently noted as a constraint both within Network Rail and within the contractor's teams.

–   When asked if their team sizes were sufficient, most teams stated that they needed greater capacity to manage change during busy project periods.
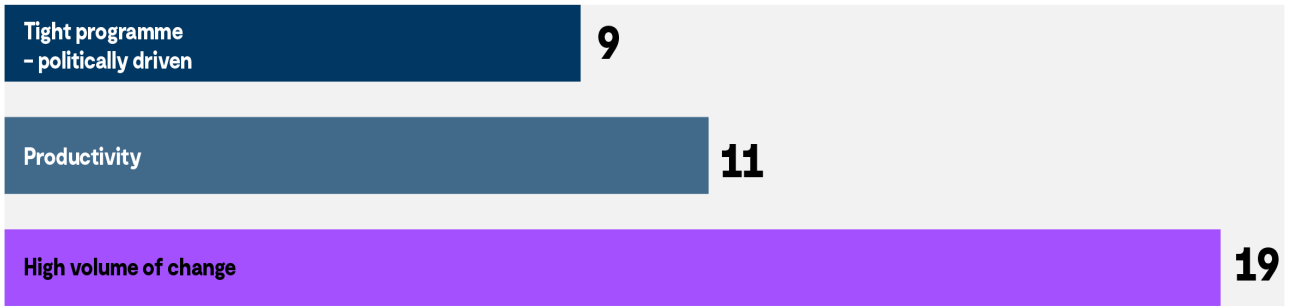
Figure 11 Key contract delivery issues identified (source: Network Rail qualitative survey responses)
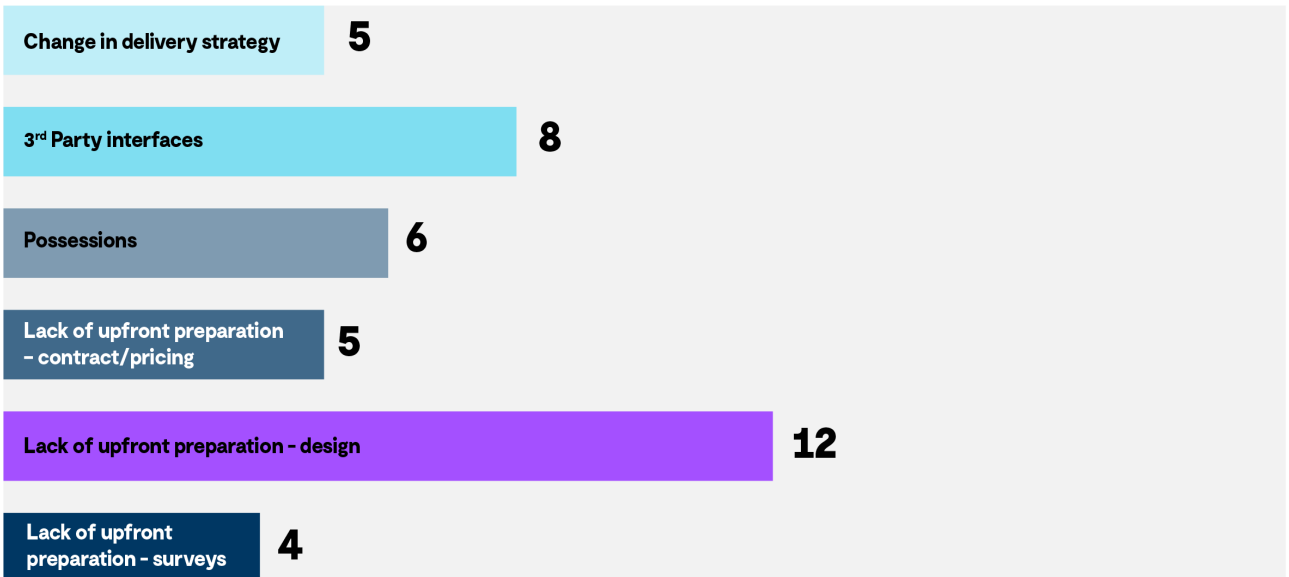
Figure 12 Reasons for high volume of change (source: Network Rail qualitative interview responses)
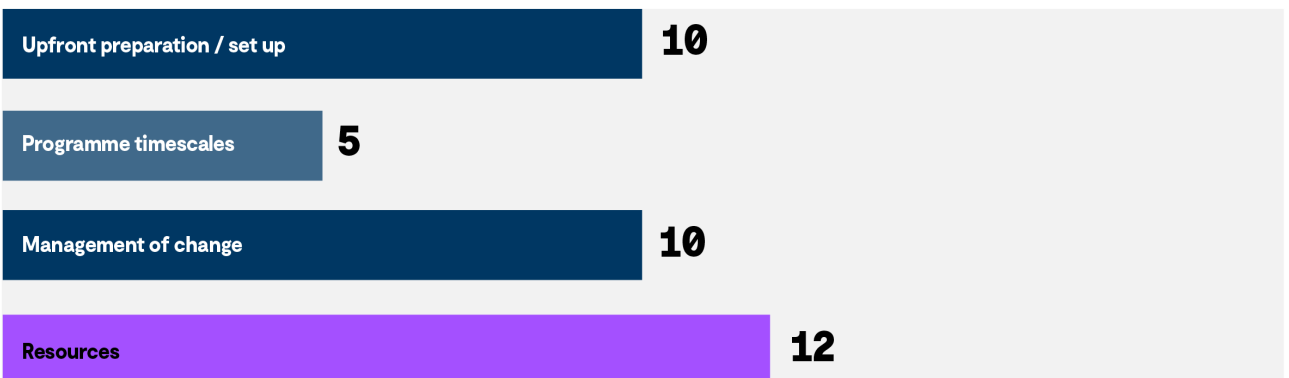
Figure 13 Contract delivery improvement areas (source: Network Rail qualitative interview responses)

Degree of support provided by Network Rail in raising & managing issues
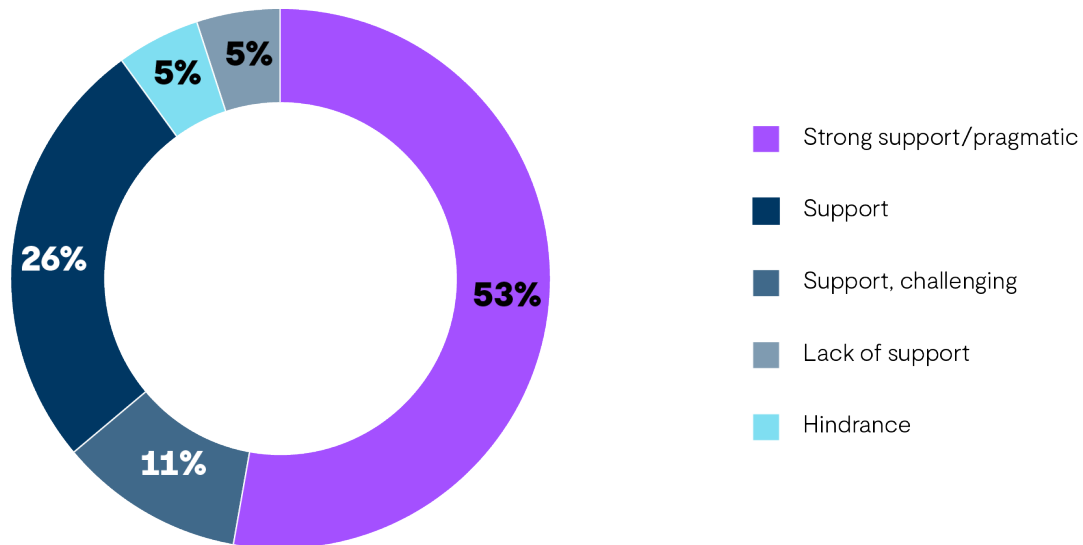
Figure 14 Degree of support provided by NR in managing issues (source: Network Rail qualitative interview responses)

Management of change was a common issue across projects, with changes often becoming backlogged and managed retrospectively. One respondent summed this up as "the whole commercial team became backwards looking on change and so couldn't be proactive in going forwards". Overall, the project teams noted that contractors were keen to raise issues, particularly changes.

CEMAR was not used or available for many of the projects that commenced before the full CEMAR rollout. Of those projects which did use CEMAR, there was a noticeable positive perception amongst the teams of how proactively and robustly contract administration could be undertaken resulting in greater change control.

In line with the key issues identified above, other key areas for improvement identified areas were upfront preparation and contract set up and programme timescales. The latter was in relation to the need to push back against unrealistic politicised programmes. Achieving programme milestone dates came at a high cost to the contracts with regards to post-contract changes resulting from a lack of upfront preparation.

3.1.5　Supply chain and the handbooks

Supplier management covers the administration of contracts, supplier performance management, supplier risk management and supplier relationship management. This aspect of the PMF is provided in two detailed handbooks:

– The Supplier Management Handbook which covers overarching supplier management requirements together with contract administration for goods and services.

– The Commercial Handbook which covers a wide range of detailed matters associated with the commercial management of works contracts.

Application and use of these two handbooks is important when considering the supply chain. Our methodology sought to understand and challenge some of the underlying inferences cited in the data. Items that related to the commercial handbook include supplier capacity to meet the projected workloads, reviewing the deliverability of unit rate assumptions and identifying how C&P activities may either generate the delivery of efficiencies or support the delivery of efficiencies identified in other areas of the business.

There have been improvements to category management, sourcing strategies and supplier management under the PMF which all provide a good basis for C&P to contribute to PR23.

– ***Supply chain engagement in contract***

Figure 15 compares key issues encountered on the projects as a proportion of responses received from contractors and Network Rail teams.
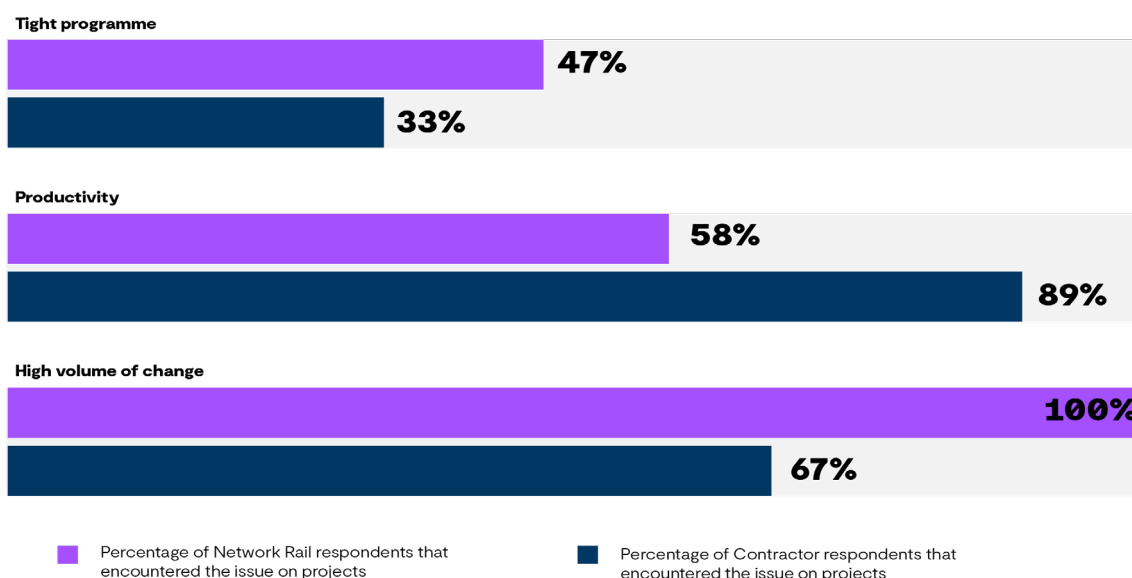
Figure 15 Comparator contract issues identified as a percentage (source: Network Rail and Contractor qualitative interview responses)

Key highlights include:

– The contractor responses were closely aligned with Network Rail's responses in relation to issues associated with possessions, third-party interfaces and change in delivery strategy. There were clear trends evidenced within the responses, such as consistent answers from both the contractors and Network Rail in respect of the perceived prominence and influence of issues such as possessions/access.

– Many contractors cited poor productivity as a key issue on the project caused by inefficient administration of contract, impacts from COVID, changes to key Network Rail resources during the life of the project and level of experience of Network Rail resources.

– The data indicates that only 33% of contractors thought challenging programmes were a key issue on projects. This is compared to 47% Network Rail reasoning.

– Whilst high volume of change was not the main issue raised by contractors and the supply chain, it was still prevalent within the responses.

We explored this further during our review as causes of contractual change can be wide ranging:

– Contractors cited lack of upfront preparation as the overriding reason for the high incidence of change on the projects. This category covers the surveys, design, contract terms & scope, and tender pricing, with Figure 15 illustrating differing perceptions on which area was the source of the issues.

– The contractors viewed contract and pricing as the main contributor to change citing instances of additional and not always associated scope being instructed onto the project after it had commenced, lack of clarity and ambiguities around scope, and inadequate risk provisions.

– Insufficient precontract surveys and inspection works were commonly accepted as a key factor influencing change. The high costs often associated with undertaking pre-contract work is acknowledged as a reason why surveys will remain a difficult problem to resolve. We note that Network Rail operate on a calculated risk model whereby they undertake a level of upfront inspections at a cost acceptable to the project budget, but which frequently proves inadequate later.

– Change management was cited as a particular problem across the projects where contractors commonly faced delays to receipt of instructions and responses to change requests and noted that commercial close out of items was especially difficult. In some instances, this caused contractors to have to work "at risk" without instruction which also led to cash flow issues, as many items could not be paid in full until the changes was formally ratified.

– Only a third of contractors interviewed believed that challenging timescales were an issue compared to almost half of Network Rail teams interviewed, suggesting that part of the time pressures felt by Network Rail are in the pre-contract phase. This aligns with the findings that projects are generally poorly defined in the early stages.

Both parties also appeared aligned on what they identified as areas for improvement. Improvement areas identified by the contractors include:

– Resource management and change management.

– We note delivery strategy changes were taken in a positive light. This was encountered on numerous projects as a necessity to positively impact schedule, time, and cost.

– Resource management was regularly discussed within the contractor interviews, although we note this was not always put forward as an area for improvement. There was an acknowledgment of the challenges currently faced by Network Rail in respect of their major restructuring programmes.

– Notwithstanding the impacts associated with operational re-structures, many of the projects experienced a succession of changes to key project personnel during the project which resulted in loss of continuity and disruption. Furthermore, examples were given of replacement staff, particularly external consultants, not having knowledge of Network Rail systems and procedures or indeed a background in rail on occasion and, consequently, better on-boarding processes are deemed necessary by the supply chain.

Figure 16 illustrates this point against no notable areas for improvement by showing that half of those interviewed could not think of any obvious areas that Network Rail could have performed better in during the delivery of their projects.
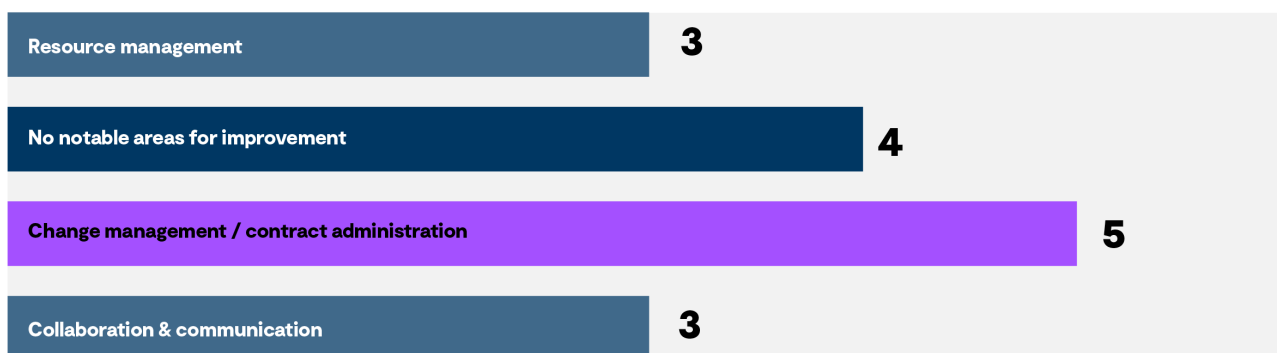
Figure 16 Contract administration improvement areas (source: Supply chain qualitative interview responses)

The contractor interviews have provided information that has corroborated, supplemented and, in some instances, conflicted with the responses received from Network Rail's commercial team overall but it has allowed the collection of valuable input from the supply chain. The contractors' commercial resources employed to deliver the projects were generally well qualified and sufficiently experienced enough to deliver the works, team size and make-up was also appropriate. Table 7 summarises the findings from the supply chain interviews into key categories and themes.

Table 7 Contractor capability key findings (source: Supply chain qualitative interview responses)

Role composition & sufficiency	– Like the Network Rail commercial teams, the contractors' commercial resources contained a mixture of levels of roles at both full and part-time. – On average there were approximately 2 no. full time equivalents (FTEs) on the projects, but this could fluctuate in line with the demands of the project. – The majority deemed the level of resource adequate with some exceptions where changes were required to make-up of teams in response to unexpected issues. – No notable correlations between size of team employed and type or value of contracts.
Experience & training	– Broad range of mixed experience but all contractors had an individual engaged in the project that had attained a construction/QS related degree. – Instances where individuals with non-cognate degrees were leading the project but no evidence this adversely effected delivery. – The larger contractors generally offered comprehensive structured training and development packages. All deemed their teams sufficiently trained to deliver their respective projects.
Software	– Various internal systems employed by the contractors, but all deemed adequate for the purposes of the project with the larger companies again having the more comprehensive provisions. – Example of project where diligent capturing and communication of contemporaneous site records greatly assisted the management and agreement of change. – Many of the projects were administered "long hand" and multiple responses cited CEMAR as a system that, if used, would have significantly benefited the project.
Technical leadership	– Majority stated that they had professional services support available if required and this was utilised by the contractors on several of the projects. – The smaller contractors involved in the lower value projects did not have this resource in-house due to the low incidence of claims or legal issues they encountered and would engage external consultants as and when required.
Lessons learnt	– As reflected in the Network Rail commercial team responses, lessons learnt were generally being undertaken either informally or formally. – There were some instances of lessons learnt being conducted during the project – Formal lessons learnt generally took place - or were planned to take place – following agreement of the final account. – Changes in Network Rail delivery team may have left them unable to properly complete the exercise in some cases.

Table 8 Contractor interviews key findings (source: Supply chain qualitative interview responses)

Change Management	All contractors were undertaking change management meetings with Network Rail, but the form and frequency of these meetings varied. A change management document was in place across majority of projects, however, once again the format was inconsistent across the projects. CEMAR used to assist management of change on projects where it was available.
Risk Management	All contractors noted that risk was discussed on the projects. Standalone risk meetings were instigated on the more complex, higher value projects. Otherwise, topic was generally covered within periodic project meetings. Risk registers not universally adopted, when in place they were not always shared with or received input by the contractors' commercial staff.
Cost Reporting	Undertaken by all contractors and generally covered all key areas such as cost-to-date, expenditure forecast by period, agreed/unagreed variations, etc.

Commercial handbook

Generally, the review found that the processes contained within the handbook are, where applicable, in line with the RICS Guidance Notes and no major deviations were identified.

Of the twenty Network Rail interviews undertaken, all but one was aware of the commercial handbook and where to find it. Six respondents (30%) noted that the commercial handbook is useful for new starters, however, 12 respondents (60%) noted they did not use it stating:

–   Experience had superseded the use of it.

–   Concern it was out of date.

–   Document was too large and generic.

In the Independent Reporter's opinion, the commercial handbook would benefit from being broken down into a selection of bespoke, mandatory, guidance notes for specific situations/contracts rather than a catch-all reference document as it is now.
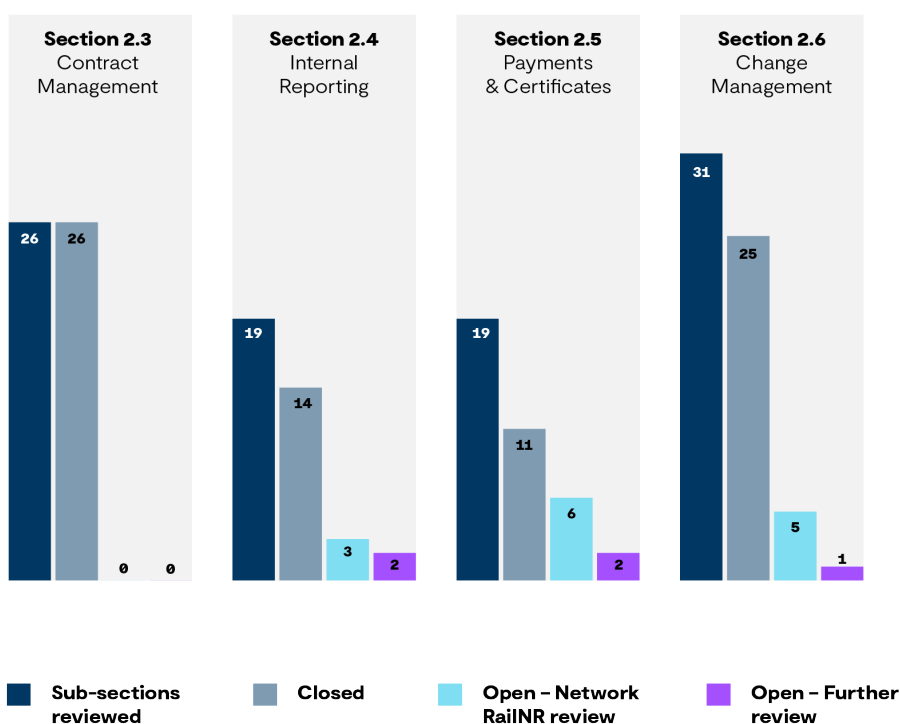
Figure 17 Network Rail commercial handbook key findings (source: Network Rail regional handbooks)

Commercial Handbook Section 2.3 - Contract Management

No areas for change.

–   Content is specific to Network Rail procedures and not comparable to RICS Guidance Notes within Black Book series.

Commercial Handbook Section 2.4 – Internal Reporting

Minor changes for consideration:

–   Addition of RICS GN UK Cost Reporting as a reference document.

–   Additional incorporation of Oracle Projects guidance for Cost and Progress Monitoring and Reporting.

–   Additional incorporation of standard flow charts for CoWD Procedure.

Commercial Handbook Section 2.5 – Payments & Certificates

Minor changes for consideration:

– Consider incorporation of standalone section specifying impact of not issuing payment certifications on time.

– Consider incorporation of payment timeline diagram in handbook rather than separate link to Guidance Note.

– Basis of calculation for different forms of contract/payment mechanisms - consider incorporation of table of high-level description/definition of each and details of components of a valuation dependent on payment mechanism in line with RICS guidance.

– Employer adjustments or deductions to interim payments – consider incorporation of a summary table of potential adjustments in line with RICS guidance.

– Assurance and audit of cost-based contracts – consider developing into a separate, standalone section in the handbook.

Commercial Handbook Section 2.6 - Change Management

Moderate changes for consideration:

– Review of "ThinkProject"/CEMAR amendments to the handbook have not been able to be undertaken.

  • Network Rail Commercial Handbook states the ThinkProject/CEMAR update was to be implemented in July 2020, this has been confirmed to be outstanding still.

  • When implementing these, consider formally categorising variations into risks/issues so that the frequency and extent of these issues can be better quantified in future.

– Employer's Representative's Instruction (ERI), variation orders, Network Rail project team-initiated contract changes, contractor-initiated changes – all will be affected by changes due to "ThinkProject". In the absence of detailed "ThinkProject" guidance, general observations of these sections are that they would benefit from enhancement of the existing flow charts, e.g. addition of timescales, how each process links and the provision of a complete suite of common templates.

– Consider incorporation of a standalone section for contractor claims and dispute resolution.

– Consider incorporation of a standalone section for supplier insolvency. Current section does not set out the commercial practices required to be undertaken in line with RICS guidance.

3.1.6   Key findings and recommendations

KR1: Review the information that all Network Rail regions use to track contract performance

F1   Network Rail has recently implemented its Claims App (Microsoft Power App) which is bespoke to Network Rail.

F2   Despite this, the approach to tracking contract performance is inconsistent across the regions and with wider infrastructure providers. The late adoption and recent shift to utilising CEMAR on all projects is likely to be a primary cause as to why Network Rail's performance tracking is not aligned within the regions themselves.

Policy aims versus contract performance

F3   Contract values are increasing. 49% of projects require re-authority and projects are finishing (on average) 30% over budget based on (an average) contingency of 12%.

F4   Contract and procurement policy is not dictating governance protocols. Almost one in five projects have commenced without successful completion of previous stage gates. In the Independent Reporters opinion this is a significant number and is contributing factor in the high rates of re-authority and overspend occurring on Network Rail projects.

F5   Tacit knowledge is lost. Two thirds of projects are suffering significant changes in internal resources. In the opinion of the Independent Reporter this is a significant factor in overspend and defence of claims as the tacit knowledge on the project is lost at alarming frequency.

F6 The Independent Reporter acknowledges the C&P route remit within the overall PMF system. The C&P policy that dictates contractual outcome is highly relevant to how the asset portfolio and investment governance is challenged. We note draw attention to F1.2 and F1.4 of the February 2021 review, and therefore conclude that Network Rail C&P policy outcomes are not materialising in the fashion intended. The 2021 review identified under F2.1 that "The PMF requires further development notably in the area of post contract management". Clarity in policy outcomes in line with the KPIs would be hugely beneficial to both the regulator and Network Rail in terms of the ability to track and understand post contract results.

ID	Recommendation
R1	C&P policy that dictates contracts should go further to incorporate the recommended KPIs and define what constitutes: – Value for money. – Efficient control. – Good practice and effective supplier relationships.

Assurance efficacy

F7 There is a contractual loop of risk not being appropriately managed or transferred, contingency not being sufficient, and submissions for additional funds. Less than one third of projects had a Quantitative Cost Risk Assessment (QCRA) validated contingency. The average amount of contingency across the portfolio is 12%.

F8 Data showed that applied average overspend versus the initial budget is 30% across Network Rail regions. Specifically, 23 projects (which incurred more than 100 contract variations) had on average a contingency value of just 8% at project outset.

F9 Network Rail's approach to budget setting appears to be inadequate, with 49% of the projects analysed requiring re-authority. The Independent Reporter questions the efficacy of the assurance regime in place which also relates to F1.3 of the February 2021.

ID	Recommendation
R2	Undertake a further review of how estimates and contingency are calculated at the outset (which should include a use of benchmarked data) and how project budgets and contingencies are set. This should investigate how budgets are allocated across projects, including the diversions of funds from smaller schemes to pay for re-authority requests, is important to identify the impact of ineffective budget setting beyond the monetary value.

F10 In the Independent Reporters opinion and experience, the Lines of Defence are not embedded appropriately despite this being previously cited in the 2021 February report, and a Commercial Assurance Group setup. We conclude that LoD2 & LoD3 requires further strengthening as the desired contractual outcomes are not materialising. It should be able to ascertain the extent to which there is systemic poor cost control, or whether it is a result of projects being proactively changed to generate overall portfolio efficiencies, or a mixture of both.

ID	Recommendation
R3	Commercial assurance should seek alignment (through changes to the assurance regime) between Network Rail and its contractor's regarding commercial contract administration. This inconsistency aligns with our findings that commercial teams do not play a prominent part of the lessons learnt process.

F11 Tacit knowledge lost is affecting commercial assurance. Network Rail interviews identified that claims were being settled at a higher rate than deemed accurate by the project team which in some instances is attributed to gaps in legacy knowledge at a project level. Defence of claims is being frustrated as the tacit knowledge on the project is lost at alarming frequency.

| F12 | The volume of contract change coupled with the finding that the current resourcing levels are insufficient has put pressure on individuals. Further reductions in the size of the Network Rail commercial teams are likely to lead towards a continuation or worsening of the trends found within this report and result in additional costs being incurred at a project level. |

ID	Recommendation
R4	Identify at the appropriate organisational level (enterprise, region, or route) the risks posed by leaner commercial organisation in line with CP7 commercial strategies. This should have clear mitigations as to how Commercial teams will flex to meet workloads.

| F13 | The commercial value to maintenance works comes from the front end when agreeing the rates within the framework tenders. A more detailed review into the inconsistency across the commercial weighting may benefit regions by having a benchmarked approach that drives the best commercial outcomes. Whilst there is value to be gained in the post-contract commercial realm for maintenance, all respondents noted there is not sufficient resource in the commercial teams to extract this and there is little resilience to absence whether planned or not. |

Contract administration, compliance, and change

F14	High levels of scope change throughout the life of the project have a material impact on the ability to effectively and efficiently contract manage.
F15	Highly competent and capable staff have cited productivity, home working and management changes, as key reasons for a highly challenging environment. Network Rail's own view is that they have the tools and processes in place alongside experienced, qualified, and trained resources to deliver projects, with the only drawback being that of the number of resources against the number of contracts.
F16	Network Rail interviews identified external politicised time pressures as an issue. This is the main driver for the number of projects commencing without a successful previous stage gate in place and were therefore not adequately prepared.

ID	Recommendation
R5	Review ECI protocols in line with the delegations of authority matrix. Programme timescales need to be better aligned with deliverables and the cost of extensions/delays weighed up with cost of post-contract changes because of lack of preparedness pre-contract. With relational style contracts under procurement in preparation for CP7, we recommend improving the quality and consistency of LoD1b assurance to align with the regional strategies. Consider making external assurance mandatory for high value / high risk transactions in line with Route Services' current practice.

F17	In the Independent Reporters view, decisions under the C&P governance framework are highly pressurised. The risks cited in the Short Form Strategy (SFS) for C&P (July 2020) have materialised and F1.4 of the February 2021 report has generally not been acknowledged.
F18	Early contractual decisions and time allowance to do make these are not adequate. The causes of scope changes and associated AFC increases include decisions made prior to project start, so for instance, allowance for the level of surveying to be done before project start (which is a risk versus cost trade off by the client), and the time allowed for the procurement process.
F19	It would appear based on the subsequent contract management challenges that these early decisions and processes often prove to be insufficient or inadequate, although further research would need to be done into the project management and investment governance to robustly assess this hypothesis.

KR2: Review how Network Rail uses this information to instigate action to improve contract performance, both within a project lifecycle or as lessons learned for future projects.

F20   The Network Rail commercial handbook is broadly aligned with wider industry standards. The review found that the processes contained within the handbook are, where applicable, in line with the RICS Guidance Notes and no major deviations were identified.

ID	Recommendation
R6	We recommend key updates to all the Commercial handbooks in line with Section 5.5.5.

F21   In terms of F5.1 and F5.2 of the February 2021 report, The Commercial Handbook of the regions takes a more detailed and prescriptive approach to managing works contracts. The handbook does not differentiate between high or low value or risk contracts.

ID	Recommendation
R7	The commercial handbook would benefit from being broken down into a selection of bespoke, mandatory, guidance notes for specific situations/contracts rather than a catch-all reference document across regions as it is now.
R8	Implement R18 from the previous report noted "provide a more prescriptive approach to the level of detail required when applying the PMF to transactions which are high value, complex or innovative. This could, for example, include a requirement for more explicit consideration of commercial, procurement and delivery risks at key points in the procurement lifecycle."

F22   Of the twenty Network Rail interviews undertaken, all but one was aware of the commercial handbook and where to find it. C&P Route Services are therefore inducting and creating awareness of the handbook as per the PMF.

F23   Nearly all projects undertook lessons learnt at the end of the project. These were in various formats, some included the main works contractors, however we found that most of the lessons did not go anywhere outside the core project group.

F24   Very few projects took lessons from previous projects into theirs at the outset unless it was part of a wider framework of similar projects. Necessary investigation is needed to establish if out-turn costs of previous projects are being used to benchmark estimates and budgets for new projects, and if so, whether the cost to Network Rail as opposed to the cost to the contractor is being used to inform these. Some projects undertook lessons learnt in the middle of a project or at the end of a certain stage, but this tended to be triggered by a particular issue rather than being a planned event.

F25   The Network Rail Commercial Handbook includes sections (2.7.2) for lessons learnt and advises that they should be undertaken at the project close out stage only. However, the commercial handbook does not provide any guidance about how lessons learnt should be embedded into the start-up of a project or provide how commercial team should feed into the process. This mirrors the findings that lessons learnt are not informing new projects and that the commercial team is not a key contributor to the process.

ID	Recommendation
R9	It is recommended outlining lessons learned requirements in the commercial handbook.

F26   The commercial handbook references the National Lessons Learnt HUB, however, none of the twenty project teams interviewed referenced capturing their lessons learnt within this application. Acknowledging that having stretched resources and that nearly all commercial staff are managing multiple projects, and therefore priorities change when moving to the next project, the lack of use of the system presents a fundamental issue with how lessons learnt are captured and utilised within Network Rail as a whole.

3.2 Contract tools, experience, and training

3.2.1 Introduction

Network Rail utilises a host of industry recognised systems to manage their projects including:

– CEMAR (commercial)

– ARM (risk)

– eB (document control)

– ProjectWise (engineering & design)

– Primavera 6 (schedule)

– Oracle (finance)

– Power BI (project controls), though its use is currently sporadic and more dependent on experienced users being within that region or team as opposed to being the norm.

Furthermore, Network Rail has recently implemented its Claims App (Microsoft Power App) which is bespoke to Network Rail and its commercial handbook.

3.2.2 Tools

85% of respondents believed that they had the tools required to deliver the project successfully, however, only 38% of projects surveyed utilised the contract management system on a regular basis. This finding contradicts the interview data where all projects interviewed that did not utilise CEMAR thought it would be beneficial addition.
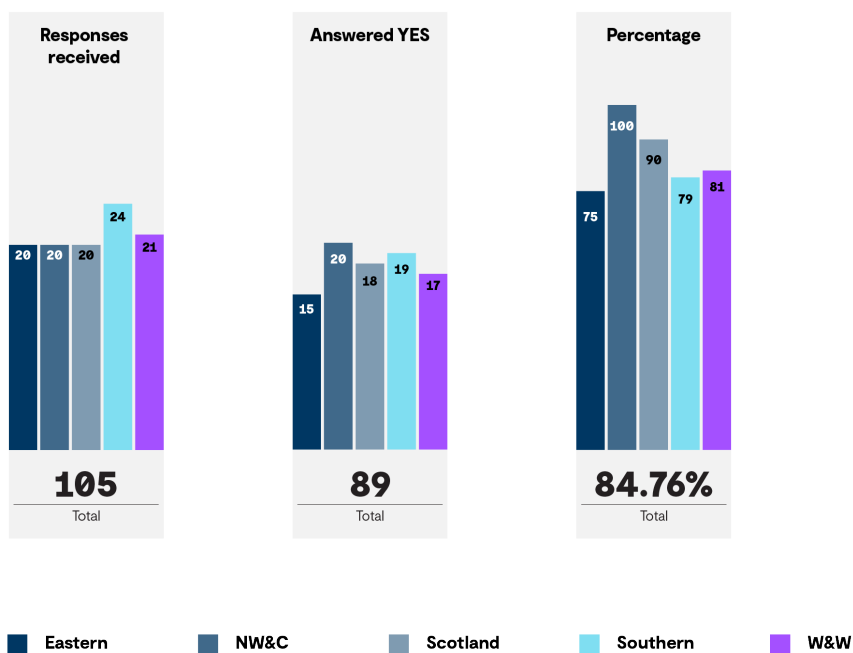
Figure 18 Correct tools & software (source GHD quantitative survey responses)

3.2.3 Experience and training

91% of respondents stated they had previous experience of the project contract form.
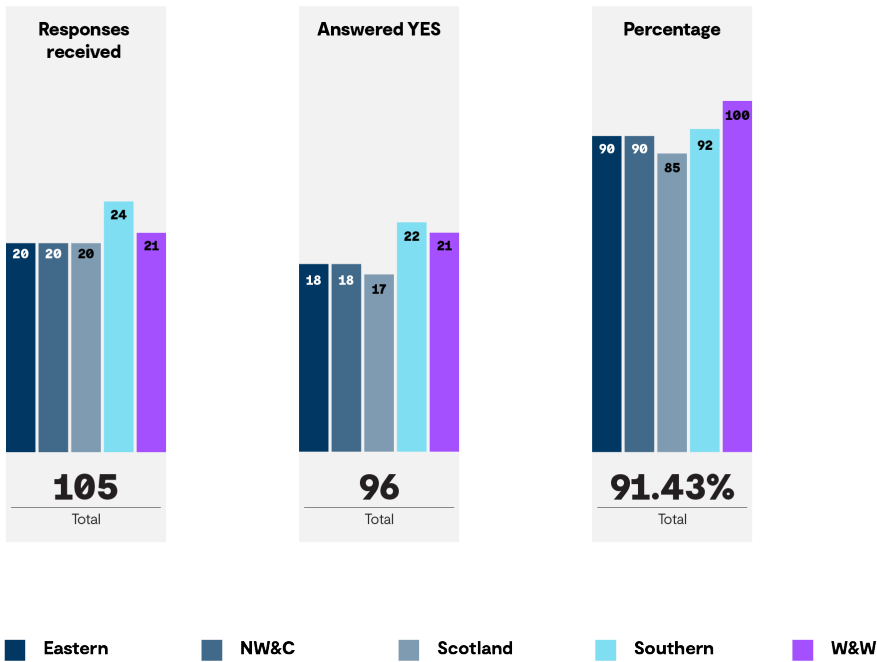
Figure 19 Correct experience (source GHD quantitative survey responses)

79% of respondents stated they had received training on the project contract.
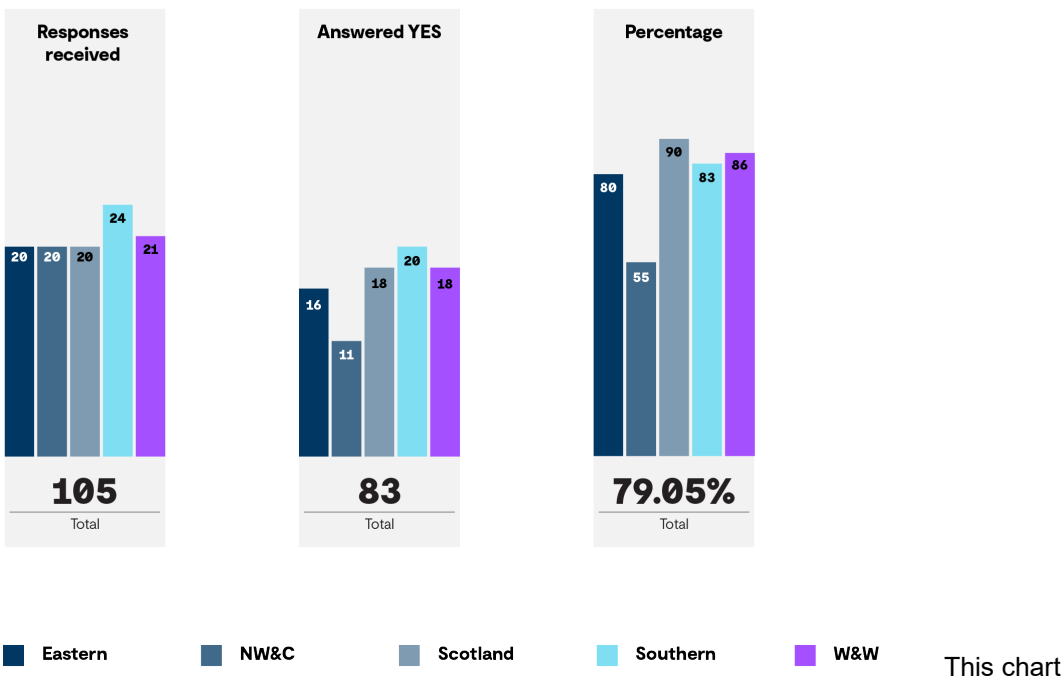
Figure 20 Correct training (source GHD quantitative survey responses)

Table 9 summarises the findings from the NR interviews into key categories and themes.

Table 9 Network Rail capability key findings (source: NR qualitative interview responses)

Role composition & sufficiency	– Due to the range of project sizes (£ value) and complexity, the commercial teams comprised a broad mixture of job grades at both full and part-time . – Some resources had very limited coverage, e.g. senior resources available only half a day a week, especially for lower value projects . – As noted above, the majority stated that more resources were required, but generally not available, during peak times . – For those projects operating under a target cost contract, it was frequently stated that the number of resources required to correctly administer the contract had been under-estimated by Network Rail from the outset .
Experience & training	– Broad range of mixed experience amongst the teams. All, except for one project had team members qualified to degree level in a relevant quantity surveying degree . – Some had team members that were chartered or working towards chartership, but this tended to be the exception . – All had some element of contract training applicable to the contract being used, with some training only delivered only at the outset, whereas other aspects were updated annually .
Tools & software	– Lack of CEMAR in place was a commonly cited issue (albeit now addressed through the rollout). – Those projects applying h CEMAR were generally more positive about how change was being managed on the project.
Governance	– All projects stated stage gateways approvals and re-authority for changes were attained. – Some stated that approvals were sometimes delayed, overlapped, or retrospectively gained due to timescales for seeking approvals and resourcing generally.
Technical leadership	– Most stated that technical leadership was in place within the commercial teams plus reach back into other departments (engineering, legal etc) for dealing with claims. – Some cited resources being stretched which affected availability and speed of response.
Lessons learnt	– Generally, lessons learnt were being facilitated either informally or formally. – Many projects stated that informal lessons learnt were being shared at earlier stages of the project. – Formal lessons learnt generally took place - or were planned to take place - at the end.

Table 10 Network Rail administration key findings (source: NR qualitative interview responses)

Network Rail Commercial Handbook	– All but one of the participants were aware of the Network Rail Commercial Handbook and saw it as a useful tool for new starters but generally was not a tool that they used in their day-to-day management of the project. – Some stated they thought the guidance and links in the handbook were potentially out of date.
Change management	– All were undertaking change management meetings in some capacity. – Many project teams had periodic change meetings either standalone or part of regular weekly/fortnightly progress or commercial meetings. – Many project teams increased the frequency of the change meetings holding dedicated or ad hoc meetings for specific changes at peak times.
Risk management	– Most project teams were holding risk meetings in some capacity. – Most had a dedicated forum on a quarterly basis to update the QRA, inclusive of QCRA. – Many project teams held dedicated risk reduction and early warning notice meetings. – Some project teams noted that risk sums within the Quantitative Risk Assessment (QRA) were being backfilled to align with the project's contingency amount.

Cost Reporting	– Cost reporting is being carried out consistently across all projects.
	– From the interviews, is it difficult to ascertain how effective the cost reporting is?
Claims Management	– Some of the project teams stated that claims had been settled at higher values than they felt were correct/accurate and that it was often timescales or the value of pursuing a claim further which dictated this.
	– One project team stated that claims would be difficult to settle due to the time that has elapsed, the high turnover of resources and lack of legacy knowledge.

Generally, the interviews with Network Rail demonstrated that their commercial team is experienced and qualified and complete regular commercial meetings, risk meetings and cost reports as expected in the diligent operation of an infrastructure project. The team is aware of the commercial handbook and most undertake the post contract governance (stage gates & re-authority requests) at the time required.

From the interviews with Network Rail, it is apparent that many issues are driven by activities outside of the control of the commercial team itself. The issues cited are known to be commonplace within the rail industry. In handling the commercial outcome of these issues, the responses confirmed that the commercial team has insufficient capacity, especially at the project's peak workload.

Resourcing issues are a common trend across all projects. This is especially noted when operating a target cost contract as there appears to be a lack of appreciation for the level of resources required for the administration of that form of contract. This is reflected in both the contractor interviews, where inefficient administration of both the contract and change mechanisms is cited as an issue regularly experienced, and in the claims management section where many of the Network Rail commercial team believe the true value of the claims is less than the value settled at, however, further investigation would be required to validate this.

With the recent implementation of the Network Rail claims app, a central register for tracking claims, it is yet to be seen how this will affect Network Rail's ability to mitigate claims. However, previously, regions were reporting the delta between the settlement value and the contractor's opening figure as efficiencies. It is recommended that this is reported against Network Rail's position or the most likely settlement position to give a more accurate reflection of efficiencies. Key findings and recommendations

3.2.4   Key findings and recommendations

KR3: Identify any gaps or improvements in the information and process that all Network Rail regions use.

F27   Network Rail have systems to manage projects well. The commercial handbook details commercial processes. In the main, these align with RICS best practice. Yet in practice, there is evidence to suggest the processes are not followed. We find that with the inconsistency in KPIs (especially those which can be generated from CEMAR), there is potential that the systems and process are not being consistently applied.

ID	Recommendation
R10	A more detailed review of project administration and assurance data points is recommended to be undertaken on a narrower sample, to enable deeper insights and specific improvement measures to be designed and implemented

F28   Contractor interviews identified concern with Network Rail's ability to administer contracts in a timely fashion. Network Rail's own view is that they have the tools and processes in place alongside experienced, qualified, and trained resources to deliver projects, with the only drawback being that of the number of resources against the number of contracts.

ID	Recommendation
R11	In line with the CP7 strategies, undertake resourcing levels analysis in terms of a skills matrix. This will enable the establishment of a standardised commercial team composition based upon project value, risk, or complexity.

3.3 Contract performance indicators

3.3.1 Introduction

The objective of this review is to inform the 2023 Periodic Review (PR23) and Office of Rail and Road ongoing monitoring of Network Rail's performance during CP6. The below includes a performance baseline for Office of Rail and Road to understand the current results and outcomes and allow Office of Rail and Road to measure the changes produced by the ongoing improvement programmes associated with the C&P Independent Review undertaken in February 2021.

To aid assessment of Network Rail's contract management capability we reviewed the quality of the Key Performance Indicators (KPIs) utilised within the organisation. We compared the regional KPIs against 12 infrastructure providers as well as each other:

– High speed rail
– Light rail/metro
– Water
– Nuclear
– Environment

3.3.2 Existing Network Rail KPIs

Data was received from Eastern, North West & Central, Scotland, Southern and Wales & Western region. An overview of the data is included as Appendix 6. Key differences are highlighted below..

	Eastern	NW&C	Scotland	Southern	W&W
Health and Safety	0	0	0	0	0
Cost	1	1	1	1	1
Time	1	0	0	1	0
Quality	1	0	0	1	0
Procurement	0	0	0	1	0
Innovation	0	0	0	0	0
Contract Admin/Compliance	0	1	1	1	1
Other	0	0	0	1	0

Figure 21 Existing Network Rail KPI Categories by region (source: Network Rail KPI responses)

Figure 22 highlights the inconsistency across the regions. Cost is the only category monitored through KPI in all 5 regions.

Cost KPIs

Within the category of cost, there is a wide range of KPIs with little alignment across the regions.

Table 11 Network Rail Cost KPIs (source: Network Rail KPI responses)

	CoWD/ forecasting accuracy	Change in price	Efficiencies	Accruals	Claims	Risks
Eastern	✘	✘	✔	✘	✘	✔
North West Central	✘	✔	✘	✘	✘	✘
Scotland	✔	✘	✘	✔	✘	✘
Southern	✘	✘	✔	✘	✔	✔
Wales & Western	✔	✘	✘	✘	✔	✘

Contract administration or compliance KPIs

Within the category of contract administration or compliance, there was a wide range of KPIs, with little alignment across the regions.

Table 12 Network Rail Contract Administration KPIs (source: Network Rail KPI responses)

	Outstanding communications	Timeliness of communications	Timeliness of payments	Timeliness of certification	Retrospective POs/ exceeded authority
Eastern	✘	✘	✘	✘	✘
North West Central	✔	✔	✘	✘	✘
Scotland	✘	✔	✔	✔	✔
Southern	✘	✘	✘	✘	✔
Wales & Western	✘	✘	✔	✔	✘

Note: Southern region plan several new KPIs this year in line with a new delivery model. This includes some in contract/compliance. The table above is based on the current KPIs.

Other KPI categories

We note that Southern have the greatest number and range of KPIs across the regions.

Table 13 Additional Southern KPIs (source: Network Rail KPI responses)

Time	– Contract awards; adherence to schedule.
Quality	– Contract assurance register; compliance with internal C&P policy.
Procurement	– Single tender action requests; by volume and value, compliance with internal C&P policy.

Potential KPIs identified for alignment during our review were in the following categories:

– Contract administration/compliance (18)
– Cost (8)
– Procurement (3).

Most potential[8] KPIs identified for cost, contract administration or compliance are already used in other regions. Timeliness of responses (payments, certificates, approvals) and management of change/claims was a common theme. Management through CEMAR would allow monitoring of response times and how many are returned requiring more information. Recommendations highlighted from the Network Rail interview are as follows.

Table 14 Network Rail interview suggested KPIs not currently monitored (source: Network Rail interview responses)

Cost	– Earned value (for large schemes only)
Contract admin/ compliance	– Submitted vs settled change or claim value – Changes submitted vs rejected
Procurement	– SME involvement – Sustainable procurement

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[8] Some items raised in the interviews were more generally related to project reporting (e.g. capturing reasons for changes) as opposed to valid performance-based metrics, or too subjective to enforce quantitative parameters, and these have been discounted from the analysis.

3.3.4 KPI benchmark results

Benchmark data of KPIs from twelve similar large infrastructure organisations (asset owners and maintainers) and major schemes (programmes and projects) within them was gathered to provide comparative data to the current Network Rail position. The below shows the spread of KPI categories across the twelve organisations.

Number of major schemes from large infrastructure organisation (out of 12)

KPI category	Value
Risk management	2
Percentage of CE value vs original budget	2
Compliant CEs	1
Number and value of CEs	4
Estimated outturn cost vs award	1
Contract mobilisation timescales	1
Approved commitments to CoWDD	1
Sustainable supply chain payments	3
Accruals	1
Timely issue of reports	3
Earned value	3
Achievement of programme milestones and key dates	5
Timely submission of updated programmes	3
Difference between AFP claimed vs certified	1
Delivery of efficiency savings (vs target)	2
Cost forecast accuracy	11

Figure 22 Benchmarked commercial KPIs (source: GHD KPI comparator benchmarking)

Table 15 identifies where KPI's align with peers from the benchmarking exercise and where they differ.

Table 15 Benchmarking comparisons (source: GHD KPI comparator benchmarking)

Commercial KPI	Benchmarked	Network Rail Existing	Identified in Network Rail Interviews
CoWD/Forecasting Accuracy	✔	✔ W&W, Scotland	✔
Efficiencies	✔	✔ Southern, Eastern	✘
Timeliness of Payments	✘	✔ W&W, Scotland	✔
Timeliness of Certification	✘	✔ W&W, Scotland	✔
Accruals	✔	✔ Scotland	✘
Claims	✘	✔ Southern, W&W	✔
Risks	✔	✔ Southern	✘
Earned Value	✔	✘	✔
Retrospective POs/Exceeded Authority	✔	✔ Southern, Scotland	✘
Sustainable supply chain payments	✔	✘	✔
SME Involvement	✔	✘	✔
Timely issue of reports	✔	✘	✘
Contract Mobilisation Timescales	✔	✘	✔
Programme (timeliness of submission)	✔	✘	✘
Programme (achievement of milestone dates)	✔	✔ Southern	✘
Single Tender Action requests	✘	✔ Southern	✘
Change Management (NR CEs, Value CEs, CE value vs original budget)	✔	✔ North West & Central, Scotland	✔

3.3.5   Recommended KPIs

Regional KPIs are not considered to be aligned by the Independent Reporter. We acknowledge that the regional devolution has allowed a level of flexibility in delivery and management, however contract performance should provide aligned, robust KPIs covering cost, contract administration and compliance.

The benchmarking exercise highlights several areas for KPI development. Suggested KPIs for consideration are listed in Table 16. Network Rail have an opportunity to make full use of the of CEMAR and its in-built capabilities to track KPIs and automate the data collection process. This will encourage a consistent approach to contract management across all Network Rail:

– We suggest that consolidating, refining, and enhancing the cost, procurement, programme, time, contract administration and compliance category KPIs should be considered.

– The sum of all the regions would provide a more robust set of cost KPIs.

– Contract administration and compliance category KPIs are an area cited in the interviews as requiring the most development.

Recommendations shown in Table 15. KPIs in italics are new to Network Rail and require development; all others are existing or modified from current regional KPIs.

Table 16 Recommended KPIs (source: GHD)

Category	Sub-category KPI	Description
Cost	**CoWD/forecasting accuracy**	(Forecast (£m)/CoWD (£m)/period accuracy/cumulative period-on-period accuracy) Reference: W&W
	Efficiencies vs target	Efficiencies reported (savings) – versus the annual targets on the strategic delivery plan Reference: Southern
	Timeliness of payments	Payment (time to make payment within contractual timescales) Reference: Scotland
	Timeliness of certification	Payment (time to certify payment within contractual timescales) Reference: Scotland
	Accruals	Level of accruals (financial accruals measured as proportion of CoWD) Reference: Scotland
	Claims	Claims KPI (gross claim value/Network Rail view/certified amount) Reference: W&W
	Risks	NEW: e.g. measure of periodic exposure against budgets, movement in periodic exposure, level of mitigation and reduction
	Earned value	NEW: e.g. compares the budgeted cost of work scheduled with the actual cost of work scheduled (combined with SPI)
	Retrospective POs/ exceeded authority	Sum of PO commitments being less than AFC; approved financial commitments greater than or equal to the current value of works done
Procurement	**Sustainable supply chain payments**	NEW: e.g. The Contractor has complied with the payment timescales stated in the conditions of contract in respect of payment to its Subcontractors
	SME involvement	New KPI to be developed
	Single tender action requests	Single tender action requests by volume and value, compliance with internal C&P policy Reference: Southern
Schedule	**Stage gate attainment**	NEW: Tracking the successful passing of previous stage gates prior to project commencement.
	Timely issue of reports	NEW: e.g. timely submission of project reports in line with the requirements of the contract/WI/scope Use CEMAR to track efficiently

Category	Sub-category KPI	Description
	Contract mobilisation timescales	NEW: e.g. number of days PO set up after contract award and prior to works commencing
	Programme (timeliness of submission)	NEW: e.g. All revised programmes required to be submitted by the Contractor by the due dates and compliant with the contract Use CEMAR to track efficiently
	Programme (achievement of milestone dates)	NEW: e.g. Completion against key dates and programme milestone dates during the relevant contract year
Contract administration, compliance and change management	**Number of changes**	NEW: Use CEMAR to track efficiently To be read in conjunction with other KPIs, not standalone
	% Value of changes	NEW: Use CEMAR to track efficiently
	CE value vs original budget	NEW: Use CEMAR to track efficiently
	Outstanding communications	Communications dealt with on time over the last 4 quarters Reference: benchmark schemes
	Timeliness of Communication	Compliant response rate to EWNs, instruction, CE quotations Reference: North West & Central, Scotland
	Changes submitted vs rejected	NEW: Use CEMAR to track efficiently
	Submitted vs settled change value	NEW: % difference between original submitted value by contractor and final settlement amount of change

3.3.6 Key findings and recommendations

KR4: Review and benchmark regional performance in managing contracts.

F29 Project monitoring, data collection and KPI's are inconsistent across the regions. With devolution of regions and sporadic rollout of CEMAR inconsistency was not surprising. The level of inconsistency across regions and wider industry suggests this needs aligning.

F30 During review of the monitoring regime, differentiation between the below is important:

– Data collected for consistent performance tracking,

– Data collected for management purposes,

– KPI data intended to drive individual contractor and Network Rail project performance.

ID	Recommendation
R12	Develop a project control workstream to review existing systems (CEMAR) in more detail. How the system is deployed across live projects. The data outputs it can generate. And how these are used to develop programme-wide outputs to track commercial performance.

F31 Common trends from the benchmarking were:

– Cost forecasting accuracy.

– Management of change (CEs, timely submission of updated programmes).

F32 Programme milestone achievement Whilst cost forecast accuracy was the most consistent commercial KPI, definitions and measurement metrics varied across the schemes. KPIs relating to timeliness of certifications and payments were, surprisingly, largely absent across the schemes.

F33 Despite change management being a key area of commercial focus. It was low to absent across many of the schemes. The measures were not robust with few best practice examples to draw upon. This was a significant area identified during the interviews. And one for development alongside the use of CEMAR (see recommendations).

F34 Less than half of the schemes used schedule management (e.g. programme milestones/contract Key Dates) as a performance measure. A quarter measured timeliness of updated programme submissions. This did not feature strongly within existing KPIs or in interviews.

KR5: Recommend up to nine Key Performance Indicators (KPIs) to provide assurance to the ORR.

F35 If general performance data is captured periodically at project level, and collated to provide programme-wide insights, KPIs can then be used in a more focused and deliberate manner in areas to drive contractor and Network Rail behaviours in areas to improve performance and project outcomes. The following table presents a non-exhaustive list of recommended areas Network Rail should focus future attention to help address performance in those areas.

Table 17 Summary of KPI areas (source: GHD)

KPI No.	Targeted Area	KPI Titles
1	CoWD/Forecasting Accuracy	Forecast (£m) CoWD (£m) Period accuracy Cumulative period-on-period accuracy
2	Payments	Time to certify payment and make payment within contractual timescales
3	Accruals	Financial accruals measured as proportion of COWD)
4	Risk	Measure of periodic exposure against budgets, Movement in periodic exposure, Level of mitigation and reduction
5	Programme	Completion against key dates and programme milestone dates which occur during the relevant contract year
6	Change Management	Number and value of changes Timeliness of communications within contract timescales Changes submitted vs rejected, % Difference between original submitted value by contractor and final settlement amount of change
7	Claims	Gross claim value/Network Rail view/certified amount

ID	Recommendation
R13	It is recommended that consolidating, refining, and enhancing the cost, procurement, programme, time and contract administration and compliance category KPIs should be considered.

F36 Recognising that not all projects will be of value or complexity enough to warrant all KPIs monitored against them, a tiered approach to the number of KPIs utilised on a project based on a RAG rating matrix concerning both value and complexity of the project may be appropriate.

F37 Less than half of the schemes used schedule management as a performance measure. A quarter measured timeliness of updated programme submissions. This element did not feature within existing KPIs or in interviews.

ID	Recommendation
R14	The review outlines proposals for a new suite of KPI measures. These need to be assessed by Network rail and implemented where applicable. Consideration should be given for implementation of these and their impact on behaviour. Involvement of external advisors to help the rollout of new KPI's may be beneficial.

KR6: What range of efficiency savings (or efficiencies) are possible if best (benchmarked) practice is obtained?

F38   The findings of the report are not at a level of detail which can extract potential efficiency savings as a value or percentage.

Appendices

Statement of works

1.0 COMMISSION INFORMATION	
Project Name:	Contract Management and CP7 Enhancement and Renewals Commercial and Delivery Strategies Review
Bravo Sourcing Request Number:	#28127
Network Rail Contact:	Kara Chester/Adam Turner
Network Rail Department:	Planning & Regulation
SoW Number:	0017
Network Rail PO Number:	[insert NR PO# when available]
Commission Value:	[insert the SoW value after this has been agreed with the supplier]
Supplier Name:	[insert the name of the selected supplier after appointment]
Main Supplier Contact:	[name and email address of the main supplier contact]

This Statement of Work (SoW) is the contractual vehicle for defining, authorising, and commissioning a piece of work to be undertaken under the Independent Reporter Framework. The SOW has six sections:

– Commission Information

– Commission Overview

– Scope of Services and Deliverables

– Knowledge Transfer

– Resource & Commercial Details

– Invoicing

This SoW is entered into under and in accordance with the terms of the Independent Reporter Framework dated1 February 2020 between Network Rail, the Office of Rail and Road, and the Supplier and includes and incorporates any special Terms and Conditions and any other amendments captured in this SoW.

Any dispute surrounding this SoW will be resolved in accordance with the Terms and Conditions outlined in the Framework Agreement.

Ownership and use of any Intellectual Property Rights shall be in accordance with the Framework Agreement Terms and Conditions.

Change control procedures are to be applied as set out in the Terms and Conditions of the Framework Agreement.

2.0 COMMISSION OVERVIEW

Supporting Documents and additional information shared as part of the tender process:
•   Document accessibility guidance for consultants

A copy of the previous independent report "Review of Procurement Strategy", from February 2021 is available on the ORR website, please see;
Review of Network Rail Contract & Procurement - Report by Nichols dated 23 February 2021 | Office of Rail and Road (orr.gov.uk)
This document is also shared in the Bravo attachments area**.**

Acronyms
C&P – Commercial and Procurement
ORR- Office of Rail and Road
NR – Network Rail
PMF – Procurement Management Framework

2.1 Background	The "Network Management Purpose" is to secure: • the operation and maintenance of the Network; • the renewal and replacement of the Network; and • the improvement, enhancement and development of the Network, in accordance with best practice and in a timely, efficient, and economical manner. To achieve the above, Network Rail procure from and contract with the railway industry supply chain. A previous review "Review of Procurement Strategy", under the independent reporter framework was carried out in In February 2021 In February 2021. The report reviewed Network Rail's Procurement Management Framework (PMF) and examined the effectiveness and maturity of the commercial and procurement (C&P) processes and how they compare to best practice. The report primarily focussed on the PMF's processes and procedures following the C&P transformation programme in early 2020. Following this report, Network Rail has implemented several improvements to date; with several improvement programmes ongoing, including revising C&P handbooks which is due to be completed by March 2022. This review is in two parts: **Part A (Review to be completed by 19th April 2022)** This is a subsequent review to the February 2021 review and aims to assess contract management within <u>all</u> Regions including both major and minor works, beyond those areas examined in the February 2021 report; by considering the results and outcomes delivered by Network Rail at a working level. The review will include a performance baseline for ORR to understand the current results and outcomes and allow ORR to measure the changes produced by the ongoing improvement programmes associated with the C&P Independent Review undertaken in February 2021.

	Part B (Review to be completed by 30th April 2022) Is a separate review of the proposed CP7 strategies. All regions are proposing utilising relational or project 13 style commercial and delivery models for part or all their renewals for CP7. However, there are differences between the strategies in the Regions. This review is to consider the impact of the proposals on SMEs, potential efficiency opportunities, risks, innovation and the degree of change required to implement the strategy / model.
2.2 Business Objectives and Priorities	In the **Part A review** the ORR is seeking assurance of Network Rail capability to manage contracts relating to maintenance, renewals, and enhancements projects/frameworks in accordance with best practice and in a timely, efficient and economical manner. The purpose of this review is to inform the 2023 periodic review and ORR's ongoing monitoring of Network Rail's performance during CP6. The **Part B review** is to satisfy Network Rail and the ORR that the proposed strategies for CP7 delivery will deliver the outcomes required and advise where changes to these strategies could improve these outcomes.

3 .0 SCOPE OF SERVICE AND DELIVERABLES	

3.1 Key requirements	The requirements comprise of two parts. A separate report will be required for each part.
	The supplier should propose how to best deliver these to meet the timescales required below.
	
	Part A: Contract Management
	(Review to be completed by 19th April 2022)
	
	The primary strands to this work are:
	1. Review and assessment of the information that all Network Rail Regions use to track contract performance for maintenance, renewals and enhancements projects/frameworks. This may include indicators such as
	    ○ claims management and variations.
	    ○ Extensions
	    ○ Damages
	    ○ Disputes/Mediations
	2. Using the above draw conclusions trends and underlying causes
	3. Review how Network Rail uses this information to instigate action to improve contract performance, both within a project lifecycle or as lessons learned for future projects.
	4. Identify any gaps or improvements in the information and process that all Network Rail Regions use to manage contracts, based on the expertise of the Independent Reporter and RICS/ICES best practice.

5. Review and benchmark regional performance in managing contracts for renewals and enhancements delivered by Network Rail against up to seven other UK and EU infrastructure managers.
6. Recommend up to nine Key Performance Indicators (KPIs) to provide assurance to the ORR that Network Rail is managing contracts for renewals and enhancements in an efficient and economical manner.
7. What range of efficiency savings (or efficiencies) are possible if best (benchmarked) practice is obtained?
8. Where appropriate use graphics to illustrate.

Part B: CP7 Enhancement and Renewals Commercial and Delivery Strategies (Review to be completed by 30th April 2022)

The primary strands to this Part B are:
1. How do the proposed strategies and models impact upon direct and indirect contracting with Small and Medium Enterprises?
2. How do the proposed regional strategies drive innovation?
3. How do the proposed regions consider the relationship between the works that will be included in these packages of work and what Works Delivery will do?
4. Do the different regions include different levels of commitment that will be embedded into these contracts?
5. Is there a discrete role for design organisations in the CP7 models?
6. What level of efficiency opportunities do the proposed approaches provide?
7. What efficiency opportunities are missed by each region's strategy and what risks are being introduced at a regional and national level? Consideration should be given to cross region working, economies of scale, task sequencing, utilisation of high-value plant assets etc.
8. What incentivisation model will the regions use? e.g., will there be no-pain and unlimited-gain sharing?
9. How will each of the regions change the NR teams and the supply chain in areas such as asset management to support the new delivery models?
10. How are safety accountabilities managed / discharged in the different regions

3.2 Key skills	It is essential that the successful bidder has the resource with the required skills and experience for this project. Bidders will need to demonstrate in their proposals how they meet the key following skills and experience as a minimum:
	i. commercial contract management and procurement processes in a regulated environment
	ii. procurement processes in a regulated environment
	iii. application of Utilities Contract Regulations (UCRs) in a regulated environment

3.3 Key deliverables	The deliverables will be staged or phased following discussion with Network Rail to optimise output. This project will comprise desktop research, remote meetings and video/telephone interviews. Each key stage shall be deemed completed by the production and sign-off an agreed stage report – programme governance will be agreed during Stage 1.

Stage	Activity	Expected Timing
1	Agree deliverables and outcomes, timeline of activities and programme governance	1 week
2	Information gather and review	c. 4-5 weeks
3	Assessment and testing	
4	Draft observations, conclusions and recommendations	
5	Produce draft final report for review	2 weeks
6	Issue final report	

3.4 Proposed approach	*[Insert at contract award stage]* [Demonstrate and detail the proposed approach for the project, covering all areas of the projects scope and clearly state the requirement(s)] Currently Network Rail is utilising remote working facilitated by video- conferencing platforms such as Microsoft Teams. Therefore, the Supplier is required to adapt to similar measures.
3.5 Schedule & timings	Contract Start Date: 28th February 2022* Contract End Date: 6th May 2022 (NB. to allow some flexibility for final report amends) *These are indicative dates and will be agreed once the contract has been awarded and the PO has been approved.
3.6 Relationship applicable for performing the duties under this statement of works contract	Data Controller and Data Processor. The only processing that the Supplier is authorised to do is listed as in Appendix 1 and may not be determined by the Supplier.

4.0 KNOWLEDGE TRANSFER	
4.1 Knowledge Transfer	*[Insert at contract award stage]* [Explain and detail how knowledge transfer is to be enabled throughout the commission and how the final output will be delivered and presented to Network Rail and ORR.]

5.0 RESOURCE & COMMERCIAL DETAILS	
5.1 Supplier Resource	*[Insert at contract award stage]* *[Key personnel which will be engaged in the commission, along with their responsibilities. Details should include sub-contractors, if sub-contractors are being utilised for the delivery of this contract commission]* In the event of "key personnel" becoming unavailable the supplier agrees to provide a replacement of equal standard and status within 48 hours of notice.
5.2 Pricing Schedule **5.3 Payment Milestones**	**This contract is based on a FIXED PRICE contract commission and will be payable in instalments as set out in section 5.3.** All prices detailed are exclusive of VAT which will be charged at the prevailing rate. This contract is based on a fixed price contract commission and will be payable in instalments as set out below; **Part A: Contract Management** (Review to be completed by 19th April 2022)

Payment stage	Dates	Payment %
1	Mid-point	50%
2	On completion	50% on completion

Part B: CP7 Enhancement and Renewals Commercial and Delivery Strategies
(Review to be completed by 30th April 2022)

Payment stage	Dates	Payment %
1	Mid-point	50%
2	On completion	50% on completion

5.4 Place of work	Given the ongoing impact of Covid-19, the Reporter should work to the assumption that this engagement will be conducted remotely or from their own offices.

	Currently Network Rail is utilising remote working facilitated by video- conferencing platforms such as Microsoft Teams. Therefore, the Supplier is required to adapt to similar measures.
5.5 Expenses	For the purpose of this contract, business travel expenses to any of Network Rail's offices [if this becomes necessary] may be claimed in accordance with Network Rail's Business Travel and Expenses policy.
5.6 Contract Variations	Variations to this Statement of Work contract may be permitted in accordance with Clause 88 of the Utilities Contract Regulations (modification of contracts during their term). All variations to this Statement of Work contract must be agreed in writing under a restated statement of works document, duly signed by all parties

6.0 INVOICING	
6.1 Invoice Details	Network Rail operates a strict "NO PO – NO PAYMENT" policy. Invoices are to be raised on completion of the contract or in accordance with the milestone payments [where applicable] set out in this SOW. Invoices should contain the following information as a minimum: • Purchase Order number • SOW number as detailed in Section 1.0 • Project Title and description Business expenses should be invoiced as a separate line and supported with receipts, as described in terms and conditions of the framework agreement and the Network Rail Business Expenses Policy. Please be aware that failure to provide the information above may potentially cause a delay in processing the invoice. Our preference wherever possible, is for invoices to be submitted via EDI. Alternatively, invoices may be submitted By email - invoices@networkrail.co.uk By post – Network Rail Accounts Payable, PO Box 4145, Manchester M60 7WZ

Previous Reporter's findings and recommendations

Table 18 Nichols Independent Reporter Findings (source: ORR)

No.	Finding Reference	Finding
1	1.1	The PMF is comprehensive and has the capability to underpin procurement operations across the end-to end lifecycle of category management, sourcing and supplier management.
2	1.2	The PMF requires further development notably in post contract management where further work is needed to finalise the supplier handbook (supplies & services) and where further work is needed to finalise the supplier handbook (supplies & services) and update and align the commercial handbook (works) with the remainder of the PMF. This is recognised by Network Rail and tracked for management action.
3	1.3	Further updates to the PMF may be required as assurance feedback (particularly from LoD2 and LoD3) is received, in response to externally imposed changes to the C&P operational model or to reflect wider lessons learned as usage increases. A commercial assurance group is responsible for identifying improvements needed.
4	1.4	Network Rail will need to further develop and maintain the PMF as an integrated system to reflect all developments which affect the C&P operational model. This will keep the PMF relevant to practitioners and enable it to support Network Rail in developing the overall maturity of its management systems.
5	1.5	The PMF is mandated but it is not yet a formal, controlled suite of procedures. Plans are in place to migrate it to Network Rail's IMS which is expected to address this point.
6	1.6	There is tracking of actions relating to short and medium-term priorities for developing the PMF, however there is not a comprehensive rolling plan to deliver the long-term vision for C&P set out in the SFS or other business objectives. C&P advised that they have commenced more detailed planning to build on the GRAI programme, but draft plans were not available at the time of the review.
7	1.7	Devolution of decisions about category management and sourcing strategies could create a risk of clashes between priorities for Route Services and regions. Network Rail has implemented mechanisms to manage this risk.
8	2.1	Governance and assurance have been streamlined as a result of the C&P transformation programme, which is intended to reduce time, be more effective and ensure separation and appropriate sequencing of the governance and assurance processes. This has been viewed positively by the regions and Route Services
9	2.2	Each region has set its own thresholds for governance and assurance within delegated limits. This flexibility allows the processes to reflect regional needs.
10	2.3	Governance and Assurance levels for sourcing are flexed depending on the contract value and risk using the RSCP risk assessment tool. This determines the level of delegation for governance, whether LoD1b assurance is required and, for some regions, responsibility for providing assurance. The tool also identifies the level of documentation required to support the governance and assurance process.
11	2.4	The three regional commercial directors interviewed suggest that the new approach is improving focus and decision making in governance forums.
12	2.5	PMF contains Assurance checklists for each stage of LoD1a assurance required. The templates for governance papers require confirmation that LoD1a assurance has been completed. However, the checklists are not prescriptive and rely on user competence and LoD1b assurance to ensure that there is appropriate checking and challenge.
13	2.6	Regions have flexibility in how they apply LoD1b assurance under the supervision of the Regional Commercial Director. There appear to be significantly different approaches across Route Services and the regions. We found evidence of good practice through detailed LoD1b assurance reports, whereas some regions deliver LoD1b through measures such as review and mark-up of documents or review at RCG meetings.
14	2.7	Based our review of a small sample of assurance papers, we have concerns about the consistency of the approach to LoD1b assurance.

15	2.8	LoD2 assurance is planned to commence in mid-2021. Whilst it is understandable that this was not progressed immediately after the PPF changes, objective assessment of the application and effectiveness of the PMF is reliant on LoD2 operating as business as usual.
16	3.1	The PMF relies on C&P practitioners holding adequate competence for the activities they undertake.
17	3.2	Competencies for practitioners involved with works C&P activities are specified and managed using a legacy IP DNA tool. Network Rail has developed an equivalent toolkit for supplies and services with an anticipated roll-out in spring 2021. This presents an opportunity to improve alignment between job descriptions and the competence framework.
18	3.3	Training requirements are met through a combination of general training providers such as RICS and through the C&P Academy.
19	3.4	With the exception of the overview briefings provided as part of the C&P transformation, there is no specific training or induction into the PMF.
20	3.5	The PMF contains checklists and templates which can be expected to drive consistency of presentation. As we have previously noted, the PMF is not deterministic and so the quality and consistency of the underlying information input to the templates may vary. Prior to LoD2 assurance, comparison of LoD1b results between regions and the role of the CAGs provides some mitigation.
21	4.1	Government social value requirements are set out in the Social Value Act and a series of procurement practice notes. We consider that Network Rail currently complies with these.
22	4.2	Network Rail is taking the Government requirements further by working with other industry bodies to develop a common RIBS. This is due for launch in January 2021. This will provide a common approach to considering social value for all procurements, not just the major works over £10m mandated under PPNs.
23	4.3	Social value requirements are not consistently included as requirements within contract terms or specifications which means that they are not always enforceable obligations post-award.
24	4.4	There is currently no standardised tracking and reporting of the delivery of social benefits and it is therefore not possible to determine the overall social value contribution being made.
25	5.1	The PMF is designed to be flexible to accommodate simple through to complex projects, by allowing the scale of deliverables and assurance to be flexed based on scale, complexity and risk criteria.
26	5.2	The style of the PMF is non-prescriptive. The potential risk of inconsistency of application is reliant on the assurance process and CAG to mitigate.
27	5.3	PMF relies heavily on practitioner competence to apply it to the specific circumstances of their projects, especially for procurement of major works.
28	5.4	C&P managers interviewed by the Reporter are confident and comfortable with the level of flexibility offered by the PMF.
29	5.5	Suppliers interviewed by the Reporter commended C&P for a flexible and agile approach to supply chain activities during the pandemic.
30	6.1	The three regional commercial directors interviewed all spoke positively about the PMF and consider that it is being followed. However, actual evidence of effective application of PMF requires LoD2 assurance to be in place and this is not due to commence before period 3 of 2021/22.
31	6.2	The Route Services managers interviewed all spoke positively about the PMF and consider that it is being followed. As with the regions, it is not possible to demonstrate how effective the application is yet as LoD2 assurance will not commence before period 3 of 2021/22.
32	6.3	The C&P transformation programme delivered a comprehensive rollout and briefings to the regions. The level of operational readiness was formally assessed by the transformation team as being adequate to permit each region to go-live with its PEP.

33	6.4	Non-critical outstanding activities were transferred into 'business as usual' within Route Services and the regions. Route Services reported that a review of the status of these activities will be undertaken by March 2021.
34	6.5	We note that much of the procurement needed for CP6 was completed prior to introduction of the PMF. The level of practitioner competence is therefore expected to increase as preparation for CP7 gathers pace.
35	7.1	Network Rail publishes its procurement pipeline in a spreadsheet on its website. It also runs regular supplier events both nationally and at a regional level.
36	7.2	Specific events and activities are in place to engage lower tiers and SMEs.
37	7.3	Strategic suppliers all said that they could add additional value by being involved in strategic thinking and decision making.
38	7.4	Suppliers also value long-term framework contracts as a means of underpinning investment in their businesses.
39	7.5	The sample of four strategic suppliers we interviewed generally regarded Network Rail as a client of choice.

Recommendations

Table 19 contains our suggested improvements to the PMF and the C&P operating model and are not associated with any significant defects or perceived risks.

Table 19 Nichols Independent Reporter Recommendations (source: ORR)

No.	Finding Reference	Recommendation	Who
1.	2.8	Undertake a formal risk assessment based on available information and, if so indicated, implement a mitigation programme based on LoD1 monitoring, LoD2 deep dives and LoD3 reviews.	Route Services / CAG
2.	PR23	Complete planning to support PR23 and confirm that the impact of additional work and other factors does not disrupt C&P development activities and ongoing operations.	Route Services
3.	General	Facilitate future reviews of the PMF (and other similar material held in the IMS) by establishing the capability to provide interactive copies of relevant content.	Route Services
4.	1.2	Amend the definition of value for money in the C&P Policy to a more broadly based definition than 'minimal and affordable cost' to reflect actual practice.	Route Services
5.	1.2	Resolve drafting assumptions and similar notes in PMF documents and update as necessary. (In hand – see Table 11).	Route Services
6.	1.5	Improve document control and configuration management for the PMF by completing its migration from the C&P Hub to a formal IMS system in line with its existing plan. (In hand – see Table 11).	Route Services
7.	1.6	Enhance the existing annual plan of key priorities and milestones for PMF development by making this a rolling programme and providing a line of sight to the long-term vision set out in the SFS. (In hand – see Table 11).	Route Services
8.	1.6	In connection with recommendation 1, continue regular reviews of feedback from assurance and governance through CAG and business assurance committees to confirm that the universal approach to sourcing processes is effective and remains valid. (In hand – see Table 11).	Route Services
9.	2.1	Add assurance arrangements for category management and supplier management to the assurance procedure. (In hand – see Table 11).	Route Services
10.	2.1	Amend the PMF sourcing module to clarify that a global sourcing strategy can be approved for contracts within a programme (similar to the former Gateway 2 process).	Route Services

11.	2.5	Revise the structure and use of assurance checklists to encourage better planning and more searching questioning – particularly for unusual or higher risk transactions.	Route Services
12.	2.6	Improve the quality and consistency of LoD1b assurance. Consider making external assurance mandatory for high value / high risk transactions in line with Route Services' current practice.	Route Services Regions
13.	2.6	Develop an action plan to improve compliance for the themes emerging from the apparently high number of significant issues identified in LoD1b assurance.	Route Services Regions
14.	3.4	Develop a PMF introduction module within the Academy to provide consistent induction and refresher training for new and existing practitioners.	Route Services
15.	4.2	Review how well the RIBS has been embedded in a LoD2 or LoD3 review to be undertaken once it has been used in a reasonable volume of procurements.	Route Services
16.	4.3	Develop model clauses for including social value requirements in contract specifications or T&Cs to improve consistency and effectiveness.	Route Services
17.	4.4	Establish consistent monitoring and reporting of social value contributions during contract delivery to provide visibility of the benefits realised at regional and corporate levels. (In hand – see Table 11).	Route Services
18.	5.1	Provide a more prescriptive approach to the level of detail required when applying the PMF to transactions which are high value, complex or innovative. This could, for example, include a requirement for more explicit consideration of commercial, procurement and delivery risks at key points in the procurement lifecycle. (In hand – see Table 11).	Route Services
19.	6.4	The review of outstanding outcomes from the transformation programme which is planned for March 2021 should be formally reported with any remaining activities planned and tracked. (In hand – see Table 11).	Route Services
20.	7.1	Publish a supplier engagement events calendar on the website to provide a higher level of visibility.	Route Services and Regions
21.	7.1	Enhance quality check on the Procurement Pipeline to ensure that data is consistent and sufficiently detailed. (In hand – see Table 11).	Route Services
22.	7.1	Provide signposts to SBPs and other background documents which support the Procurement Pipeline. (In hand – see Table 11).	Route Services
23.	Good practice items 4, 5 & 6	Amend the PMF sourcing module to explicitly require assessment of factors which may affect packaging (such as economies of scale, shared site facilities, shared access and the like). Develop the sourcing module to address the issues raised in connection with risk allocation and route to market.	Route Services
24.	Good practice item 7	Develop the PMF to include requirements for benchmarking of supplier performance.	Route Services
25.	Good practice item 7	Confirm that the implementation of CEMAR and planned updates to the Commercial and Supplier Management Handbooks provide a comprehensive and integrated approach to managing change and disputes in contracts.	Route Services

Network Rail's Ongoing Work

Throughout the review, Network Rail have advised us of activities related to the subject matter which are either planned or underway. We have summarised these activities in Table 20.

Table 20 Nichols Independent Reporter Activities (source: ORR)

No.	Report Reference	Activity	Responsible
1.	First key finding	Network Rail is working to extend the application of Line of Defence (LoD) 2 assurance, but we recommend that action is taken to mitigate the risks which arise pending completion of this.	Procurement Operations
2.	Rec. 5	Drafting assumptions or similar notes in PMF documents should be reviewed and resolved.	Procurement Operations
3.	Rec. 6	Network Rail should seek improved document control and configuration of the PMF by progressing its migration from the present C&P Hub to a more formal IMS system	Procurement Operations
4.	Rec 7	Network Rail should enhance the existing annual plan of key priorities and milestones for PMF development (and wider operational priorities) by making this a rolling programme and providing a line of sight to the long-term vision set out in the SFS	Procurement Operations
5.	Rec 8	Network Rail should continue to undertake regular reviews of feedback from assurance and governance through CAG and business assurance committees (BACs) to confirm that the universal approach to sourcing processes is effective and remains valid.	Procurement Operations
6.	Rec 9	Add assurance arrangements for category management and supplier management to the assurance procedure.	Procurement Operations
7.	Rec 17	C&P considers how social value contributions can be monitored and tracked post contract to provide visibility of the contract level and overall level of social value contributions delivered. Amend the PMF sourcing module to clarify that a global sourcing strategy	Procurement Operations
8.	Rec 18	C&P should consider providing a more prescriptive approach to the way that application of the PMF is mandated for transactions which are high value, complex or innovative. This could, for example, include a requirement for more explicit consideration of commercial, procurement and delivery risks at key points in the procurement lifecycle. can be approved for contracts within a programme (similar to the former Gateway 2 process).	Procurement Operations
9.	Rec 19	The review of outstanding outcomes from the transformation programme which is planned for March 2021 should be formally reported with any remaining activities planned and tracked. Revise the structure and use of assurance checklists to encourage better planning and more searching questioning – particularly for unusual or higher risk transactions.	Procurement Operations
10.	Rec 21	A regular quality check should be carried out on the Procurement Pipeline to ensure that data is accurate, consistent and sufficiently detailed. Improve the quality and consistency of LoD1b assurance. Consider making external assurance mandatory for high value / high risk transactions in line with Route Services' current practice.	Procurement Operations
11.	Rec 22	Ensure that there are sufficient signposts to strategic business documents which can support the information on the Procurement Pipeline. Develop an action plan to improve compliance for the themes emerging from the apparently high number of significant issues identified in LoD1b assurance.	Procurement Operations
12.	Finding 4.2	Changes to PMF associated with PPN 06/20 Taking Account of Social Value in the Award of Central Government Contracts. Develop a PMF introduction module within the Academy to provide consistent induction and refresher training for new and existing practitioners.	Procurement Operations
13.	Finding 7.2	Development of an action plan to improve SME access to Network Rail's top 60 suppliers.	Procurement Operations

Survey Questions

Table 21 Survey questions (source: GHD)

Qualifying Questions	Full Name
	Email address
	If you are in a region, which do you operate in?
	What type of project is this?
	What is the name of this contract/project?
Pre-Contract	what procurement method was specified?
	If answered 'Other' to previous question, please specify below
	What was the contracting strategy?
	What form of contract was employed?
	If the contract is a Network Rail standard form of contract, which contract no. was used?
	What was the tender strategy?
	Was the award under OJEU regulations?
Design & Governance	What was the actual level of design surety at award?
	Had the project successfully achieved the previous stage gate at contract award?
Budget & Contingency	What was the original budget allocated?
	What was the value of initial contract award?
	What was the contingency allowance at initial contract award?
	How was the contingency allowance calculated?
	Was the contingency underpinned by QCRA?
Variations & Claims	How many variations did/do you have?
	How many were/are not agreed through implementation? i.e., via project manager's assessment or senior representatives' agreement
	What was the average duration between issuing and implementing compensation events?
	How many claims/disputes do you have?
	What was the combined value of these?
	In your opinion, what was/were the fundamental reasons for change on the project?
	What was the average value of variations?
	What was the largest value for a single change on the project?
	What was the largest duration for a single change on the project?
Risk	Was there an allocated risk pot held locally?
	Was there a risk pot held centrally?
	Who owned/owns the project risk pot(s)?
	How often were quantitative cost risk assessments held?
	If answered 'other' in previous question, please specify below
Tools & Systems	Was a contract administration/management software used on the project?
	If yes, what system was used?
	Do you think the project had the tools to manage the contract?
Final Account & Damages	What was the final account value?
	How long after completion was the final account agreed?

	What was the remaining risk value at project completion?
	Did the project have to go back to re-authority?
	Were delay damages accrued?
	Were delay damages levied?
	How was the final account agreed?
Team & Training	On average, how many contracts does your team manage?
	How many team members manage these contracts?
	What is your job role?
	How many years contract management experience do you have?
	Do you have previous experience of delivering projects under the form of contract used?

Interview Questions for Network Rail

Table 22 Interview questions for Network Rail (source: GHD)

Capability Questions	Size of team
	Experience of team members
	Appropriate qualifications
	Appropriate training (both internal & external)
	Project Governance/ Assurance in place
	Tools and Software in place
	Technical leadership in place/ available
	Lessons learnt facilitated
Administration Questions	Checks against the NR Handbook
	Stage gates checks
	Change meetings/ process
	Risk meetings/ process
	Cost reporting – were issues raised and acknowledged
Deep Dive	Discussion about why the project went well/ badly
	Do you feel comfortable raising project issues/ does NR welcome issues being raised proactively
	Does the Contractor feel able to raise issues in a collaborative manner with NR
	Do you feel NR could have done anything differently/ better
	Do you feel commercial could have done anything differently/ better
	Are there any commercial KPIs do you feel would be beneficial in implementing
AOB	

Interview Questions for the Contractors

Table 23 Interview questions for the contractors (source: GHD)

Capability Questions	Size of team
	Experience of team members
	Appropriate qualifications
	Appropriate training (both internal & external)
	Project Governance/Assurance in place
	Tools and Software in place
	Technical leadership in place/available
	Lessons learnt facilitated
Administration Questions	Change meetings/process
	Risk meetings/process
	Cost reporting – were issues raised and acknowledged
Deep Dive	Discussion about why the project went well/badly
	Do you feel comfortable raising project issues/does Network Rail welcome issues being raised proactively?
	Does the Contractor feel able to raise issues in a collaborative manner with Network Rail?
	Do you feel Network Rail could have done anything differently/better?
	Do you feel commercial could have done anything differently/better?
AOB	

List of projects interviewed with Network Rail

Table 24 Projects interviewed with Network Rail (source: GHD)

Bromsgrove electrification
ETCS at RIDC Melton
Garrow Hill
Gipsy Patch Lane bridge
Hither Green signal renewal
Langport embankment
London Luton Airport Parkway overbridge
London South HV PSU
Mersey PSU
Mitre bridge
New Clyde
Oxted viaduct
Park Junction
Queen Street Station development
RCDP EARTH works - embankments
Reston Station
WCPSU
Werrington grade separation
Wigan LMD
WP3 enhanced stations

List of Contracts Interviewed with the Contractors

Table 25 Contracts interviewed with the contractors (source: Network Rail)

Garrow Hill	AMCO
Gipsy Patch Lane bridge	Alun Griffiths
Langport embankment	Suttle Project Ltd
Mersey PSU	Volker Rail
Mitre bridge	BAM
New Clyde	Taziker Industrial
Oxted viaduct	BAM
London Luton Airport Parkway overbridge	AMCO
Werrington grade separation	Morgan Sindall

Overview of existing Network Rail KPIs per region

Region	Health & Safety	Cost	Time	Quality	Procurement	Innovation	Contract Admin/ Compliance	Other	Comments
North West & Central		Original Price of Selected Contracts					Communications Outstanding		From the 17th of May the CEMAR data will be linked to Power-Bi reporting and the region will have real-time interactive reports for Commercial activity and administration.
		Change in Price of Selected Contracts					Communications Outstanding		
		Change In Price Over the last 12 Periods					Communications Dealt with On Time Over The Last 4 Quarters		
		Total of Certified Payments/ Invoices in Current Period							
Southern		Efficiencies reported (savings) – versus the annual targets on the Strategic Delivery Plan.	Contract Awards – adherence to schedule						
		Risk Heat Map – Impact/ Likelihood							
		Open Claims - Contractors' view vs NR's							
Wales & Western		Claims KPI (Gross Claim Value/ Network Rail View/ Certified Amount)					Payments within 21 days (Payments over 21 days FALSE/ TRUE)		Part of a wider dashboard including:
									Key Performance Indicators (KPI).
		Forecast/ CoWD KPI (Forecast (£m)/ CoWD (£m)/ Period Accuracy/					Payments KPI (Av of Cert to Inv (7 day rule)/ Av of App to		Forecast Vs Cost of Work Done (COWD)

Region	Health & Safety	Cost	Time	Quality	Procurement	Innovation	Contract Admin/ Compliance	Other	Comments
		Cumulative Period-on-period accuracy)					Cert Days (14 day rule)/ Av of Payment to Terms KPI)		Supplier Payments and Apps & Certs by Supplier
									Invoices On Hold
									Mandatory Training

Region	Health & Safety	Cost	Time	Quality	Procurement	Innovation	Contract Admin/ Compliance	Other	Comments
Scotland		Level of Accruals (Financial Accruals measured as proportion of COWD)					Management of Change (Response to CR's, Issue of PMI's)		The Commercial KPI measures that we have proposed are all monitored but not all in such a formal way as the introduction of RAG rated KPI's would do.
		Contingency Levels (Larger Projects (with QCRA))					Payment (Time to certify payment within contractual timescales)		
		Contingency Levels (Smaller Projects (no QCRA))							
		Accuracy of Spend Forecasts (COWD v Budget Forecast measured each period)					F4 Ambers (Oracle flag where Authorised Phase AFC is recorded as exceeding Financial Authority.)		
		Enhancements Client Costs: Prelim. Staff £ in the Ground							
		Renewals Client Costs (LoC 1/ LoC 2) Prelim. Staff £ in the Ground					Payment (Time to make payment within contractual timescales)		
Eastern		Total client side staff total per £0.5bn CapEx spend	Time Spent in PACE Phase 1-3 in 9 months (from May 2021)	Component Cost and Productivity					
		P80 Risk: Total priced contingency allowance in AFC	Pre-Site Spend - %						

Region	Health & Safety	Cost	Time	Quality	Procurement	Innovation	Contract Admin/ Compliance	Other	Comments
		for pricing risks to P80.	of total - Amount of total AFC spent pre-site mobilisation						
		Enhancements Efficiency Target							
		Component Cost and Productivity	Component Cost and Productivity						

Network Rail Interview KPI Responses

| Cost | | | Contract admin/compliance | | | | | | | | Procurement | |
Accuracy of forecast/delta with AFP/EV	Original price vs CoWD	Timeliness of Certification	Management of change (generally)	Contract award to time on site	Claims Tracking (generally)	Timeliness of Communication	Timeliness of Approvals	Submitted vs settled change/ claim value	Time to agree a change/claim	Changes submitted vs rejected	SME Involvement	Sustainable Procurement
						1	1	1	1			
	1									1	1	1
	1	1		1		1		1				
	1				1	1						
									1			
1			1									
1			1									
					1	1						
										1		
1	1					1	1					
1												
1												
Total Count												
5	4	1	2	1	3	6	2	2	2	2	1	1
Total Category Count												
11			20								2	

Integration with Central Network Rail

Primarily the regions share three forms of data with Central Network Rail (CFO/ELT/CPO):

Claims – albeit there is inconsistency about whether this is via register or the claims app (noting the app has only recently been implemented).

Authority – 'One up reporting' ensures that changes to project/procurement authority are captured at the appropriate level.

Performance – periodic board reports contain details of claims, financial and commercial issues.

The regions have detailed other elements that are captured. These were not universally stated when responding, without further review into the suite of documentation submitted to Network Rail Central, it is not possible to establish if the following are captured in anyway as standard:

Supply chain risk

Contract assurance register (governance breaches)

Efficiencies

General risks

Generally, as part of the devolution to the regions, there is less submitted to Network Rail Central than would be expected if the business were still centralised. There is no data to suggest these impacts on the commercial performance of the regions.

One region noted that the reporting of claims to the register or app is not mandated. Claims, lessons learnt, and contract performance metrics would not only be beneficial to be mandatorily captured centrally, but also shared nationally.

The benefit to this would be being able to give each region a national view of key aspects such as supplier performance, through claims and contract performance, and innovations and efficiencies, through lessons learnt.

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