

Network Rail & Office of Rail
Regulation

**Network Rail and 3rd party
delivered station works**

Efficiency review

6 May 2016

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1 Executive Summary

1.1 Mandate overview

The following report presents our findings from our review of Network Rail and 3rd party delivered stations projects under the joint ORR and Network Rail mandate¹ dated 12th May 2015.

The purpose of this review was to assess the costs of a sample of stations projects, to determine if:

- costs incurred for the projects were efficient; and
- whether there is a significant difference in project costs for Network Rail and 3rd party delivered projects, and if so, the reasons for these variances.

The projects assessed were the Network Rail delivered ‘Access for All’ (AFA) programme (typically footbridge and lift projects on stations), Train Operating Company (TOC) delivered National Stations Improvement Programme (NSIP, smaller scale improvements on stations) and ‘Third party’ (i.e. local governments) delivered new stations, such as Pye Corner in Wales and Newcourt in Devon.

1.2 Methodology

There were a number of difficulties in responding to the two questions posed in the mandate. Firstly, as illustrated above, the type of projects assessed varied considerably, making a comparison of NSIP and AFA projects almost meaningless. Secondly, the respective delivery organisations (TOC/ Network Rail / local government) had completely different approaches to capturing cost data, for example only Network Rail used the Rail Method of Measurement (RMM). Thirdly, there were different ways of dealing with indirect (for example project management) costs. Network Rail include these in project costs, whilst TOCs and others are able to absorb this cost as a general business overhead.

To take account of this, we identified five efficiency tests to provide constructive answers to the mandate:

- What is the variation between projects within a programme (e.g. AFA project vs AFA project)?
- How do project costs within a programme vary over time?
- How did Network Rail delivered projects compare with 3rd party projects?
- How do Network Rail project costs compare to other comparable industries (e.g. airports); and
- How do specific items, e.g. lifts compare with broader benchmarking?

Using these tests, we were able to conclude the following in respect of the mandate questions.

¹ “Network Rail and 3rd party delivered station works – efficiency review”

1.3 Findings

Question 1 - Were costs incurred efficient?

- Although some inefficiency was evident at the outset of the AfA programme (The programme commenced in 2005) as evidenced by higher indirect costs, more recent Network Rail project costs are consistent and have generally improved over time.
- Network Rail's AfA programme compared favourably to other industries engaged in long term capital delivery plans in terms of their direct and indirect cost ratio. Costs for items such as lifts and bridge decks are also comparable with those that we have sourced and validated from outside the rail sector.
- Despite this, we cannot state that no further efficiencies can be achieved on the AfA programme. The ratio of direct to indirect costs was found to be 78/22. Our benchmarking analysis could not identify an optimum ratio of direct to indirect costs.

Question 2 - Is there a significant difference in project costs for Network Rail and 3rd party delivered projects, and if so, the reasons for these variances?

- Due to the factors outlined above we were unable to provide a meaningful answer to this question. Essentially comparison between Network Rail and 3rd party projects was not possible.
- As a result, in the future we recommend that all publicly funded railway projects use a consistent methodology, namely RMM, to record their project costs and enable comparison of projects over time and between different programmes of work.

Supporting information for the benchmarking sample and the original mandate are provided in the appendices to this report.

2 Mandate Overview

2.1 The mandate summary

Arup has been appointed under Lot 2 of the Independent Reporter Framework to carry out a review of a sample of stations projects, comparing those delivered by Network Rail with those delivered by 3rd parties identifying if:

- Costs incurred for Network Rail station projects are efficient; and
- If significant variances exist between Network Rail and 3rd party projects, what are the reasons for these variances?

Our response to these two key questions has been dependent on the breadth and quality of data provided both by Network Rail and 3rd parties. The mandate required between 15 and 20 schemes to be analysed across a range of geographical locations and the following funds:

The Access for All (AfA) programme

The AfA programme was established in 2005 with the aim of increasing the number of accessible stations across the network. The March 2010 Control Period 4 Delivery Plan targeted a 5% (125 stations) increase in accessible stations by March 2015. In CP4 ongoing funding of £390m was allocated with a further £160m in CP5 and to date 150 have been delivered.

The AfA programme generally requires the design and construction of new lifts or ramps and footbridges. These projects are currently delivered by Network Rail Infrastructure Projects (IP) via framework agreements, alliances or competitive tender with the supply chain.

The National Station Improvement Programme (NSIP)

NSIP is not delivered directly by Network Rail and instead requires Train Operating Companies (TOC's) to work with Network Rail routes in Local Delivery Groups (LDG's). Funding to the 17 LDG's is apportioned by a programme board consisting of industry stakeholders. A requirement for funding is that each LDG identified private funding to contribute to station redevelopment or improvements. To date in CP5 an additional £44m of 3rd party funding has been secured using this mechanism.

The Scottish Stations Fund (SSF)

The SSF has been operational since 2014 and aims to lever 3rd party investment to provide improved stations and facilities. Local promoters (such as Local Authorities, Regional Transport Partnerships and developers etc) are required to demonstrate the need for investment and the potential benefits. The fund is currently worth up to £30m.

In addition to the above, the mandate specified the inclusion of three specific projects as follows:

- Pye Corner (Raised by Welsh Government for inclusion in this review)
- Newcourt station (New Stations Fund)
- Johnstone car park (Raised by Scottish Government for inclusion in this review)

Both Pye Corner and Newcourt station are projects delivered under the New Stations Fund by third parties with Network Rail providing Asset Protection, Assurance and Sponsorship services. This is an alternative method of funding capital expenditure on brand new or re-opened stations for heavy rail services in England and Wales and is promoted by third parties. This excludes improvements or refurbishment at existing stations, the funding of new or reopened lines (even if associated with a “New Station”) or the relocation of existing stations. A portion of match funding is required to help meet the cost of the works.

As detailed in section 3.1 the scope of the third party projects selected is fundamentally different to works undertaken on the Access for All programme.

2.2 Methodology

In our proposal we submitted the following proposal to fulfil the requirements of the mandate.

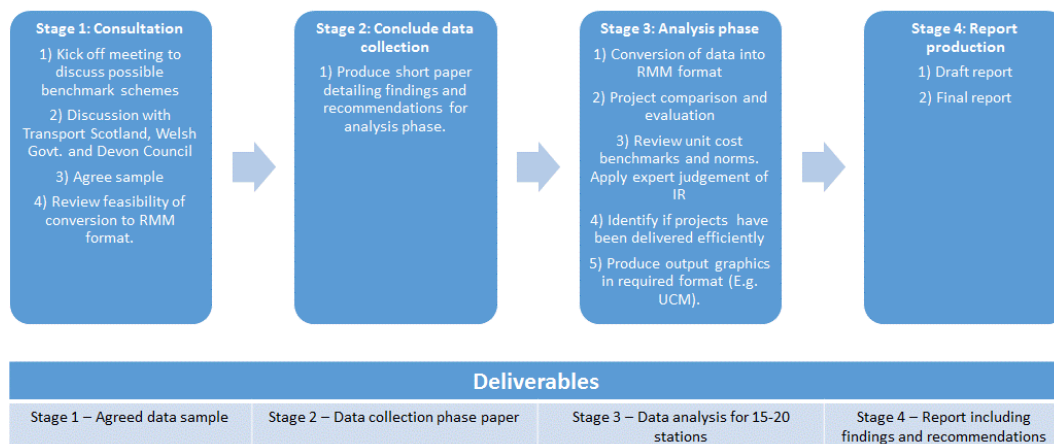


Figure 1.0 – Methodology for efficiency review

During Stage 1 we discussed the scope of the study and the sample data and information needed. We focused on obtaining data across the AfA programme, NSIP, SSF and the New Stations Fund. This approach and data sample selection was undertaken jointly between the ORR, Network Rail and the Independent Reporter.

Following receipt of sample data comprising two NSF projects, 8 AfA schemes and 8 NSIP projects the decision was taken to progress to the analysis stage of the process. The third party project data sample did not permit the transferral of data into the Rail Method of Measurement (RMM) format desired. This reflected the comparatively low level of data disaggregation and resulted in a greater focus on direct and indirect cost analysis.

Our work has been carried out in line with an agreed methodology based on an initial data gathering exercise, a review of that information with Network Rail and the ORR and subsequent analysis. This analysis has been adapted to reflect the quality of the benchmarking data obtained and to draw practical conclusions and recommendations from the analysis.

2.2.1 Efficiency tests

Given the difficulties of comparing the different projects and programmes, we defined the following tests to understand whether the costs incurred have been efficient.

Test 1: How does the data for direct and indirect costs compare from project to project with a programme?

A lack of consistency in works of a similar size and scope would suggest that some projects were being delivered less efficiently than others. However, consistency across similar projects would not mean they are in themselves efficient.

Test 2: Within the AfA and NSIP programmes, how have costs changed over time?

As a programme of similar works progresses, it should become more mature, learning how to do the same things more effectively and hence efficiently.

Test 3: How does the Network Rail data compare to comparable third party projects?

Whilst AfA and NSIP are different, the data for new stations delivered by local governments should be more comparable however it should be recognised that there remain differences in the constraints of NSF projects over those delivered under AfA.

Test 4: How does the Network Rail data compare to other industry sectors?

The delivery of capital intensive infrastructure investment can be compared with other industries, giving a reasonable comparison of the efficiency of the direct and indirect costs incurred.

Test 5: How do specific items, e.g. lifts compare with broader benchmarking?

Particular elements of the AfA scheme, such as lifts and bridges, can be compared with the same elements delivered in other environments, such as airports. It should be noted that this does depend on the specification for lifts being comparable.

These tests reflect both the high level nature of this analysis and also the depth and quality of data obtained for benchmarking purposes

3 Findings from the benchmark analysis

The data sample obtained for this study has been limited and only permits high level analysis of direct and indirect costs and some limited benchmarking of certain key items such as lifts or bridge decks.

To truly understand the variance in costs between Network Rail delivery and 3rd party we recommend that in future parties commit to capturing all project costs in a comparable format, using the Rail Method of Measurement (RMM) as the guiding document. This could be a stipulation of funding for future 3rd party delivered projects, clearly identifying the scope of project costs and where these, for internal accounting purposes, are not included in the cost of the project.

3.1 Comparison of direct and indirect costs

Direct costs are those of construction and building works generally incorporating the contractor's costs and preliminary items (e.g. site management and logistics). Indirect costs are those associated with professional fees and services, client's project management and legal or property services for example. Generally, higher direct costs indicates that more is being directly invested in the asset itself rather than in its planning, design and delivery.

It is important to understand the limitations in comparing costs across the three programmes. This is because of a number of differences which can be summarised as follows.

The scope, work type and site area constraints of NSIP/ AfA and 3rd party projects are fundamentally different.

TOC delivered NSIP projects comprised small scale building works of low to medium complexity (E.g. station building remodelling or forecourt remodelling) undertaken in areas not requiring track access with the associated levels of safety consideration on a live railway. Network Rail delivered AfA projects tend to work within or immediately adjacent to the operational railway. Thus for AfA projects, some level of additional costs will be incurred due to increased health and safety and project management and planning requirements, which includes compensation to TOCs for disruption to their services resulting from the projects.

As a result Network Rail could reasonably be expected to carry a larger management cost burden than 3rd party delivered projects due to their need to deliver projects of vastly varied scope, complexity and safety demands.

In turn this leads to differences in how projects are procured.

Small to medium sized projects carried out in the Green Zone open up the opportunity to use more local, small to medium sized enterprises (SMEs) rather than utilise larger contractors on framework agreements that are required to provide a higher level of service in a safety critical environment. Procurement strategy can therefore directly influence the level of indirect costs associated with the work undertaken. Furthermore, specific procurement strategies such as design and build handover the design and management of the works at an earlier stage, thus reducing the level of indirect costs incurred by the client. Variances in procurement strategy for 3rd party projects can present an opportunity but can also result in misinterpretation of the data.

There is an inconsistency between the programmes in data gathering approaches.

Network Rail employs a system to capture project costs at key GRIP stages known as the Cost Analysis Framework or CAF. This data captured is used for business planning and also contributes to forecasts produced at periodic reviews. The system has been the subject of an Independent Reporter review previously with generally positive findings².

It is unreasonable to expect that both the system employed by Network Rail and 3rd parties capture data in the same way. Whilst construction costs appear to be captured based on the data received, indirect costs such as management time can easily be allocated to alternative cost centres within a 3rd party organisation, skewing the results of the comparison. Based on our experience of delivering Cost Management services and that of Turner and Townsend, the indirect costs for TOC delivered NSIP projects were considered very low at less than 10% on average

The variances observed in the data sample highlight the problems in comparing Network Rail delivered projects with those of third parties.

Given the above caveats, the analysis of direct and indirect costs illustrates these variances but does not provide direct evidence that one delivery method is more efficient or delivered at a lower cost than the other.

As shown in Table 1.0 Network Rail direct costs are approximately 78% versus indirect costs of 22%.

Project	Scope- summarised	Delivery Approach	Direct costs	AFA Direct average	Indirect costs	AFA Indirect average
Dunblane	Bridge works and work to three lifts	Access for All (AfA)	85.1%	78.4%	14.9%	21.6%
Dyce	Bridge works and work to two lifts	Access for All (AfA)	87.8%		12.2%	
Exeter	Lift installation (2x), Footbridge works, Station alterations	Access for All (AfA)	58.9%		41.1%	
Hazel Grove	Lift installation (2x), Footbridge works and station alterations	Access for All (AfA)	83.0%		17.0%	
Newton	Bridge works and work to two lifts	Access for All (AfA)	79.3%		20.7%	
Rosyth	2 x ramps	Access for All (AfA)	73.8%		26.2%	
Shotts	1 x ramp	Access for All (AfA)	76.9%		23.1%	
Twyford	Creation of an accessible route to each platform	Access for All (AfA)	82.0%		18.0%	

Table 1.0 – Direct and indirect costs for Network Rail AfA schemes

² Independent Reporter Mandate Part A: Audit of the Robustness of the Network Rail Unit Cost Framework, May 2010

3.2 Outcome of the five efficiency tests

3.2.1 Test 1: How does the data for direct and indirect costs compare from project to project within a programme?

As shown in Table 1.0 direct costs for the 8 benchmark projects vary from between 59 and 88%. On average the direct costs for AfA schemes are 78.4% whilst indirect costs comprised 21.6%. Outliers for these averages included Exeter (41% indirect costs), Rosyth (26% indirect costs) and Shotts (23% indirect costs).

Exeter was one of the earliest AfA schemes completed in 2007 and substantial changes were made in the delivery framework as costs were considered to be inefficient. Since 2007, none of the projects sampled exceeded 26% indirect costs and of the 5 projects delivered in 2013 the level of indirect costs was 19.4%.

Direct costs, with the exception of Exeter tend to fall within a 15% margin of each other. However, as shown in Appendix 2 there are significant variance in how direct costs are allocated across sub-categories indication that not all data is collated on a similar basis.

3.2.2 Test 2: Within the AfA programme, have the costs become more efficient over time?

Table 2.0 table details each AfA project, its financial year of completion and the ration of direct to indirect costs.

AfA project	Financial year of completion	Direct costs	Indirect costs
Exeter	2007/08	58.9%	41.1%
Hazel Grove	2008/09	83.0%	17.0%
Twyford	2009/10	82.0%	18.0%
Dyce	2013/14	87.8%	12.1%
Newton	2013/14	79.3%	20.7%
Rosyth	2013/14	73.8%	26.2%
Shotts	2013/14	76.9%	23.1%
Dunblane	2014/15	85.1%	14.9%

Table 2.0 – AfA direct and indirect costs over time

As shown, the earliest project (Exeter) had very low direct costs and prompted the review of programme delivery for AfA projects. Since that period a trend of improvement is evident however this dips on three projects in 2013/14 although by no more than 9% (E.g. when comparing Twyford with Rosyth). Most recently in 2014 the level of direct costs for Dunblane is comparable with earlier levels.

In our opinion, comparison of direct and indirect costs for the NSIP versus AfA does not provide any meaningful basis for the evaluation of Network Rail efficiency. However we can say that for AfA projects there is evidence of some trend of improvement although it is not strong enough evidence to indicate that this is a direct result of any focus or efficiency drive on the part of Network Rail

3.2.3 Test 3: How does the Network Rail data compare to comparable third party projects

Table 3.0 compares the data received from Network Rail versus the third party projects for NSF and NSIP. This is instructive in identifying the significant impact of asset protection and other Network Rail services for both NSF and AfA projects. This is almost nil for NSIP third party projects. Higher preliminaries are also notable on AfA projects as could be reasonably anticipated given the requirement to install new lifts or bridge decks versus station or forecourt improvements. It should be noted that the data sample for NSF at this time is for only 2 projects.

	NSF Average (Third Party delivered) 2x schemes	AfA Average (Network Rail delivered) 8x schemes	NSIP Average (Third Party delivered) 7x schemes
Prelims	8.28%	14.10%	4.77%
Main work	41.71%	60.67%	84.72%
Claims	7.18%	2.11%	1.00%
Temp. works	1.97%	1.48%	0.85%
Direct	59.14%	78.35%	91.33%
Network Rail Management	32.67%	10.01%	2.70%
Design	8.19%	11.64%	5.97%
Indirect	40.86%	21.65%	8.67%

Table 3.0 – AfA versus NSF and NSIP projects.

Third party projects comprise those delivered under the NSF (Pye Corner and Newcourt Station), SSF (St. Johnstone Car Park) and NSIP. As detailed Network Rail direct and indirect costs vary by approximately 12% when compared with NSIP projects and approximately 25% when compared with the NSF. Essentially Network Rail spends more money on indirect costs than the third party projects identified. However, scope, safety and working area constraints drive much of the variance between projects undertaken in the Red Zone versus those requiring limited Health and Safety Management.

Our review of the supporting information for 3rd party projects found that these are no less susceptible to incurring additional costs than Network Rail projects. Newcourt station, an NSF project, was originally scheduled to open before the end of 2014 at a cost of £1.5m. The station eventually opened in June 2015 and at a final cost of £2.44m due to unanticipated works such as the replacement of signal box equipment, accessibility features, and increased land and rail industry costs.

Whilst the project was still delivered to a demanding timescale the lack of visibility of scope and additional costs using our earlier definitions would be classed as inefficient. Whilst the NSF funding mechanism encourages third party investment it should not come at the expense of robust project and risk management. Visibility of scope and cost is a key component of efficient delivery.

3.2.4 Question 4: How does the Network Rail data compare to other industry sectors?

As shown below when compared to external comparators Network Rail direct and indirect costs are within an acceptable range. This is particularly relevant in the aviation sector where similar access and working area constraints affect the indirect costs associated with delivery (As an example, this adds further indirect costs in terms of design, planning and health and safety).

Delivery Route	Direct costs (%)	Indirect costs (%)
Access for All (AfA)	78.4%	21.6%
<i>Network Rail Infrastructure Projects Benchmark Analysis Ranges (source: Network Rail, July 2014)</i>	<i>Direct %'s 55% - 67%</i>	<i>Indirect %'s 37%- 45% (av)</i>
<i>Water sector – asset enhancement (Turner & Townsend benchmarked data)</i>	<i>Direct %'s 66% (av.)</i>	<i>Indirect %'s 34% (av)</i>
<i>Aviation – Minor works (Turner & Townsend benchmarked data)</i>	<i>Direct %'s 71% (av.)</i>	<i>Indirect %'s 29% (av)</i>

Table 4.0 – Comparison of direct versus indirect costs for Network Rail with external providers of infrastructure assets.

AfA levels of direct versus indirect costs were compared with those benchmarked from Network Rail infrastructure projects, asset enhancement in the water sector and minor works in the aviation sector. As shown the AfA projects had a higher level of direct costs and lower indirect costs, a positive outcome meaning that more money is spent on the asset rather than the costs of planning, design and delivery.

3.2.5 Question 5: How do specific items, e.g. lifts compare with broader benchmarking?

Table 5.0 below details the benchmarked rate of AfA pedestrian bridges versus benchmark data obtained from the wider Network Rail business. The benchmarks are therefore relevant and constructed in a like for like environment to those delivered via AfA.

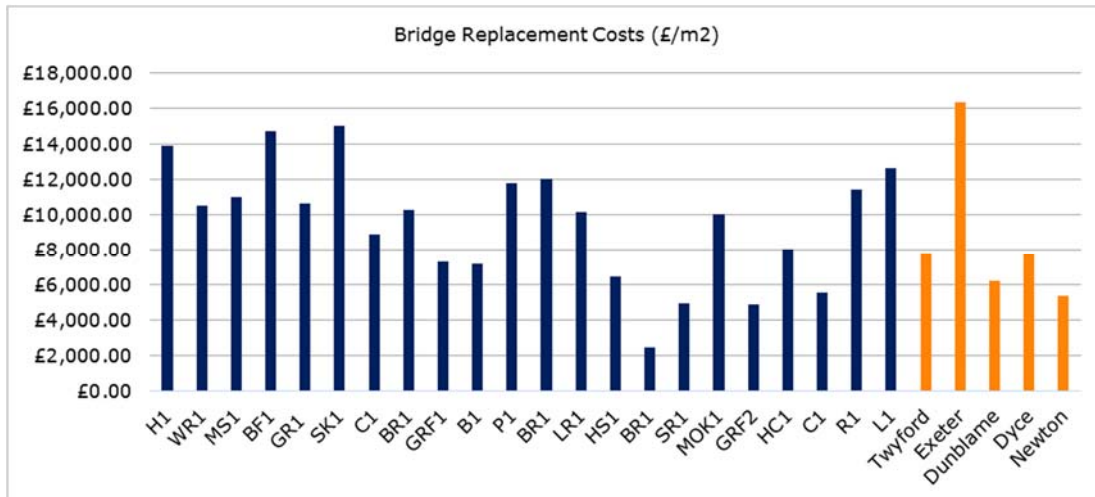


Table 5.0 – Bridge benchmark data

The Turner and Townsend benchmarking illustrates a wide range of costs for bridge projects. This is likely due to the inclusion of both data for bridge renewals and bridge replacement and a broad range of differing bridge types (e.g. Victorian era bridges and more modern reinforced concrete or steel). In Arup's experience a typical construction cost planning rate for a new build bridge to be constructed in engineering hours is between £6,000 to £12,000 per m² dependent on the type of bridge and the proposed construction methodology.

The average benchmark rate based on wider Network Rail data is £9,530/m² versus an AfA average (based on a relatively low level of sample data) of £8,688/m².

Access for All bridge projects with the exception of Exeter (an early AfA scheme) are considered to be in the appropriate range of costs for bridge replacement and compare favourably with wider Network Rail benchmarking. If Exeter is removed as a benchmark the average for AfA schemes is circa £6,000/m².

Lift costs were also benchmarked as shown in Table 6.0 below.

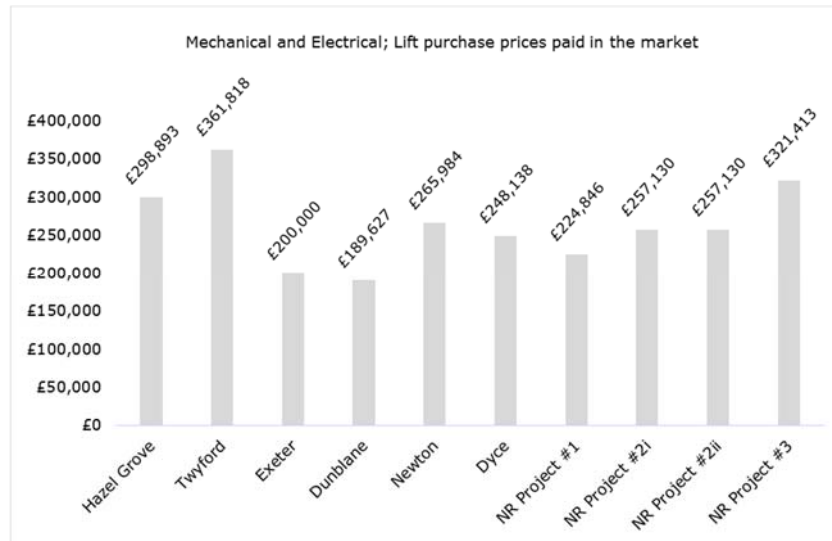


Table 6.0 – Lift benchmark data

As shown above the cost of lifts is variable, undoubtedly due to the variation in location and specification between each project. A wide variety of external lifts are available and project specific issues such as condition of existing lift shafts can have a significant impact on cost. From a cost planning perspective Arup would typically allow a rate of £250,000 for the supply and installation of a 17 person lift operating over 2 floors. This compares to an average rate of £260,743/lift in the AfA benchmark sample and £265,129/lift.

In summary, the unit cost of items such as bridges and lifts is variable across the sample and compares favourably both with benchmark data and also external sources of estimating knowledge and experience of supplier costs. There is no supporting evidence that the design, procurement and installation of bridges or lifts is inefficient based on the sample data and level of information provided.

3.3 Turner & Townsend analysis

Appendix 2 provides key extracts from the benchmarking exercise undertaken by Turner & Townsend exploring the comparison of direct and indirect costs in further detail with supporting benchmarking information.

Appendix 1: Supporting information

Notes on analysis

Our review of Network Rail efficiency is limited to the interpretation of the Network Rail data provided. Wider analysis of issues such as planning, design standards, procurement and delivery approaches and working methodologies were not analysed on a case by case basis and were outside of the scope of work.

Using the data set provided, indicators of inefficiency include abnormally high direct or indirect costs when compared across comparable projects or abnormally high costs associated with delivery of similar scope. Additionally, where such data was provided we have been able to analyse the cost of some key cost items such as lifts and new bridge decks.

Information received

Information has been gathered from Network Rail, Chiltern Railways and Southwest Trains. Firstly, it should be remembered that the scope of “Station Projects” is broad and covers the following type of works:

- Station building alterations and renovations;
- New build bridges;
- Renovated bridges;
- Lifts and lift shafts;
- Pedestrian ramps;
- Improved station facilities such as car parking.

This is a very broad scope of small to medium sized projects and is difficult to categorise without compromising the production of a representative data sample. This has necessitated grouping all of the projects and analysing their comparative levels of direct and indirect costs and then undertaking specific studies of the cost of, for example, bridge decks or lifts.

The information received has been adjusted to reflect a common base location and point in time for inflation purposes using recognised Building Cost Information Service (BCIS) indices.

There are several limitations in the data provided as follows:

- Scope is highly variable therefore a like for like comparison between a Network Rail delivered station has not been made with a 3rd party delivered project of similar size, complexity and constraints;
- Cost data is not captured using a consistent methodology across the data sample. There is therefore inherent uncertainty in identifying variances in costs such as project management. Network Rail however does have a consistent approach to data capture known as the Cost Analysis Framework (CAF);
- Different organisations take different approaches to the capitalisation of management and other development costs when presenting project costs. Network Rail endeavours to allocate all indirect costs generally from GRIP 2 or 3 onwards however 3rd party organisations may treat the same costs as a business overhead; and

- Not all data was captured at the “Final Account” stage corresponding to GRIP 8. The full and final costs are therefore not 100% confirmed for the majority of the AfA projects.

Both the sample data and the above points limit the extent to which costs incurred are “efficient” and the reliability of any immediate comparisons of, for example, management and other indirect costs.

Appendix 2: Benchmark data

No.	Project	Brief overview of works	Route	Delivered by	Financial and non financial information reviewed?	Overall Costs	Direct Costs	Direct Costs as a %	Indirect Costs	Indirect Costs as a %
a1	New court	New station	New Stations Fund (NSF)	3rd Party	Yes	£2,440,304.02	£1,315,348.11	53.9%	£1,124,955.91	46.1%
a2	Pye Corner	New station	New Stations Fund (NSF)	3rd Party	Yes	£3,740,566.00	£2,407,776.00	64.4%	£1,332,790.00	35.6%
b1	Dunblame	Bridge works and work to three lifts	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£1,749,582.88	£1,489,687.71	85.1%	£259,895.17	14.9%
b2	Dyce	Bridge works and work to two lifts	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£2,826,124.63	£2,481,960.63	87.8%	£344,164.00	12.2%
b3	Exeter	Lift installation (2x), Footbridge works, Station alterations	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£1,125,846.30	£662,691.83	58.9%	£463,154.47	41.1%
b4	Hazel Grove	Lift installation (2x), Footbridge works and station alterations	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£1,182,331.53	£981,408.12	83.0%	£200,923.41	17.0%
b5	Newton	Bridge works and work to two lifts	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£1,680,808.68	£1,332,620.68	79.3%	£348,188.00	20.7%
b6	Rosyth	2 x ramps	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£1,892,784.36	£1,396,575.83	73.8%	£496,208.53	26.2%
b7	Shotts	1 x ramp	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£1,971,981.33	£1,516,528.56	76.9%	£455,452.77	23.1%
b8	Twyford	Creation of an accessible route to each platform by demolishing an existing footbridge and constructing a new footbridge including 3Nr lifts across the tracks which included alterations to the existing platform surfacing, fencing and M&E	Access for All (AfA) Network Rail Delivered Schemes	NR	Yes	£2,978,875.16	£2,443,140.79	82.0%	£535,734.37	18.0%
s1	New Johnstone	Car park, new first floor on top of ground floor car park, no lifts	Scottish Stations Fund: ScotRail	3rd Party	Yes	£1,632,027.92	£1,632,027.92	100.0%	£0.00	0.0%
c1	Warwick Station	Refurbishment of subway (new vitreous enamel lining), New lighting, stair treads and handrails	National Stations Improvement Programme (NSIP): Chiltern Railways	3rd Party	Yes	£350,357.43	£316,807.43	90.4%	£33,550.00	9.6%
c2	Clapham Junction	New waiting room for customers and station alterations	National Stations Improvement Programme (NSIP): Southwest Trains	3rd Party	Yes	£807,605.19	£731,769.19	90.6%	£75,836.00	9.4%
c4	Farnborough	An additional entrance/exit link road to the station car park, the new road also links the existing upper and lower car parks.	National Stations Improvement Programme (NSIP): Southwest Trains	3rd Party	Yes	£341,864.51	£303,309.51	88.7%	£38,555.00	11.3%
c5	Sunningdale	New station building	National Stations Improvement Programme (NSIP): Southwest Trains	3rd Party	Yes	£763,193.50	£726,178.50	95.1%	£37,015.00	4.9%
c6	Fleet	Demolition of the existing 'Clasp' type station building, Construction of a new station building and Remodelling of forecourt area	National Stations Improvement Programme (NSIP): Southwest Trains	3rd Party	Yes	£1,239,977.00	£1,172,352.00	94.5%	£67,625.00	5.5%
c7	Aylesbury	Extension to existing waiting room, Refurbishment of booking hall and toilets, Additional ticket gate	National Stations Improvement Programme (NSIP): Chiltern Railways	3rd Party	Yes	£607,748.50	£605,823.50	99.7%	£1,925.00	0.3%
c8	Hadenham and Thame Parkway	Replace platform waiting shelter with a fully enclosed waiting room and New drainage, purpose built soak away system for rainwater outfall	National Stations Improvement Programme (NSIP): Chiltern Railways	3rd Party	Yes	£545,000.00	£480,836.55	88.2%	£64,163.45	11.8%

	NSF	NSF	AFA	AFA	AFA	AFA	AFA	AFA	AFA	AFA	NSIP (SSF)	NSIP	NSIP	NSIP	NSIP	NSIP	NSIP
	Pye Corner	New court	Hazel Grove	Twyford	Exeter	Dunblame	Dyce	Newton	Rosyth	Shotts	Johnstone Car Park	Clapham Junction	Farnborough	Sunningdale	Warwick Station	Hadenham and Thame Parkway	Fleet
Prelims	11.9%	4.6%	0.0%	0.0%	0.0%	14.1%	26.1%	19.7%	27.5%	25.4%	9.1%	2.0%	1.1%	0.3%	5.5%	3.2%	16.5%
Main work	52.0%	31.4%	83.0%	82.0%	58.9%	64.9%	40.8%	59.1%	45.5%	51.1%	79.4%	86.5%	87.7%	94.9%	84.9%	84.7%	69.6%
Claims	0.0%	14.4%	0.0%	0.0%	0.0%	0.0%	16.9%	0.0%	0.0%	0.0%	9.9%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%
Temp works	0.4%	3.5%	0.0%	0.0%	0.0%	6.1%	4.1%	0.4%	0.8%	0.4%	1.6%	2.0%	0.0%	0.0%	0.0%	0.3%	2.7%
Direct	64.4%	53.9%	83.0%	82.0%	58.9%	85.1%	87.8%	79.3%	73.8%	76.9%	100.0%	90.6%	88.7%	95.1%	90.4%	88.2%	94.9%
Network Rail Management	23.9%	41.4%	4.0%	4.0%	8.4%	7.5%	7.1%	12.3%	19.9%	16.9%	0.0%	0.1%	2.0%	0.0%	9.4%	4.6%	0.0%
Design	11.7%	4.7%	13.0%	14.0%	32.7%	7.4%	5.0%	8.5%	6.3%	6.2%	0.0%	9.3%	9.2%	4.9%	0.2%	7.2%	5.1%
Indirect	35.6%	46.1%	17.0%	18.0%	41.1%	14.9%	12.2%	20.7%	26.2%	23.1%	0.0%	9.4%	11.3%	4.9%	9.6%	11.8%	5.1%

Appendix 3 – Mandate

INDEPENDENT REPORTERS: TEMPLATE MANDATE

Mandate for Independent Reporter Lot 2

<i>Title</i>	NR and 3 rd party delivered station works – efficiency review
<i>Unique Mandate Reference Number</i>	
<i>Date</i>	12/05/2015
<i>ORR Lot Lead</i>	Andrew Wallace
<i>ORR lead for this inquiry</i>	Matt Wikeley
<i>Network Rail Lot Lead</i>	Jon Haskins
<i>Network Rail lead for this inquiry</i>	Jon Ratcliffe / Audrey Laidlaw / Ed Neave

Background

Network Licence requirement in this area:

Network Rail is required to secure the improvement, enhancement and development of the network in accordance with best practice and in a timely, efficient and economical manner so as to satisfy the reasonable requirements of persons providing services relating to railways and funders.

For CP5 ring-fenced funds, we will check NR is delivering projects at efficient costs by assessing a sample of schemes (as we stated in the PR13 Final Determination). Three of the CP5 ring-fenced funds are required to deliver station projects:

1. National Stations Improvement Programme (NSIP);
2. Access for All (AfA); and
3. Scottish Stations Fund.

Recent discussions with Transport Scotland and Welsh Government

Transport Scotland and Welsh Government have both raised concerns with us over the cost of Network Rail delivered station works, compared to those projects delivered by 3rd parties. These were in discussions towards the end of 2014.

Purpose

The purpose of this review is to review the costs of a sample of stations projects, to determine if:

- costs incurred for the projects were efficient; and
- there is a significant difference in project costs for NR and 3rd party delivered projects, and if so, the reasons for these variances

Scope

The scope of this mandate is to compare the costs for a sample of station projects against each other, benchmarks and norms. This is to determine whether the costs incurred were efficient and if there is a significant difference in the costs of NR and 3rd Party delivered schemes.

The exact sample size of schemes to be reviewed should be agreed following discussion with Network Rail and ORR but in total we expect the study to review around 15-20 schemes. The sample of schemes should cover all three funds listed earlier in this mandate across a range of geographical locations (including England, Wales and Scotland). The third party delivered schemes should include

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those highlighted by Transport Scotland and Welsh Assembly. The following projects should be considered for inclusion in the sample for review:

- Pye Corner (raised by Welsh Government)
- Newcourt station
- Johnstone Car Park (raised by Scottish Government)

The scope of this mandate includes the collection of cost information, conversion into a common estimate format (NR's RMM – Rail Method of Measurement, and any further breakdown to allow comparison with cost elements in NR's unit cost model) and analysis of the estimate to determine if the costs are efficient. The reporter should report its conclusions and make any recommendations it considers will improve the efficient delivery of NR schemes.

The scope of this mandate excludes review of the scheme selection process, fund governance arrangements or programme delivery.

Methodology

The review should be completed in two phases – data collection and analysis. There will be a break-point in the review after data-collection when ORR, NR and the IR will decide if the review should continue to the analysis phase.

Data collection phase:

- Initial discussion with ORR, NR (including programme sponsors) on schemes suitable for review.
- Discussion with Transport Scotland, Welsh Government and Devon Council on schemes delivered by 3rd parties and data available
- Propose and agree sample of schemes with ORR and NR (by correspondence).
- Collect of data from Network Rail and 3rd parties
- Review feasibility of converting data into common NR RMM estimating format.
- Present conclusions of data collection review to NR and ORR, in short paper, with proposed next steps for analysis phase.

Analysis phase:

- Convert cost data into NR RMM format to identify:
 - unit costs for direct cost elements; and
 - indirect costs (e.g. contingency, PM and contractor prelim costs) as a percentage of point estimate.
- Compare costs between the NR and 3rd party delivered schemes, tabling the differences with commentary on reasons why.
- Compare the costs of each scheme against unit cost benchmarks and norms for indirect costs. This should include comparison against NR's internal estimating benchmarks and the expert opinion of the IR. Using this information the IR should conclude if it considers the schemes have been delivered efficiently.
- The comparison of the unit costs should also be illustrated on unit costs curves, in a format similar to NR's UCM. Please see appendix 2 for an example of this format.
- The reporter should make any recommendations it considers applicable to improve the efficient delivery of station schemes.

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Timescales and deliverables

The below table sets out the required timescales for this review.

	Week Commencing
NR / ORR issue final mandate	18 May 2015
Reporters proposal issue for comment	1 June 2015
Reporters proposal accepted	8 June 2015
Initial Planning Meeting (ORR / NR / reporter)	15 June 2015
Progress updates	fortnightly
Issue paper with findings of scoping phase	13 July 2015
Meeting – decision to progress to analysis stage	20 July 2015
Draft report issued by reporter	10 August 2015
ORR and NR return comments on draft report	17 August 2015
Final report issued by reporter	24 August 2015

Related work

There were two independent reporter reviews of station funds in CP4. These are listed below with links to the exec summaries available on the ORR website:

- NSIP efficiency and deliverability review: http://orr.gov.uk/_data/assets/pdf_file/0005/4559/stations_improvement_programme_oct2011.pdf
- Access for All programme review: http://orr.gov.uk/_data/assets/pdf_file/0020/4925/enh-access-for-all-programme-jan11.pdf

Independent Reporter Proposal

The Reporter shall prepare a proposal for review by the ORR and Network Rail on the basis of this mandate. ORR and Network Rail will review the proposal with reference to the criteria for selection – see attached guidance document and scoring matrix.

We are sending this mandate to all Lot 2 Contractors and we expect to pick the Contractor to complete the work on the basis of a mini-tender, as described under paragraph 12 of Appendix 1. We therefore expect the proposals to demonstrate concisely (2-4 pages) how the proposal and Contractor meets the criteria required for selection. This should also highlight any conflicts of interest with the reviews highlighted in this mandate.

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The final approved proposal will form part of the mandate and shall be attached to this document.

It is anticipated that the work under this mandate should take no more than 50 man days. The reporter should take cognisance of this in preparation of the proposal. The proposal will detail methodology, tasks, programme, deliverables, resources and costs.

Given the importance of this inquiry, the Reporter shall provide qualified personnel with direct experience in the respective disciplines to be approved by the ORR and Network Rail. The contractor is asked to submit details of the previous experience and qualifications of such personnel as part of their proposal.

Appendices

- Appendix 1 – Joint ORR and Network Rail Guidance to Reporters
- Appendix 2 – Example of NR Unit Cost Model outputs

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Appendix 1 – Joint ORR and Network Rail Guidance to Reporters

1. The purpose of this document is to describe the trilateral relationship between ORR, Network Rail and each Reporter. It sets out in a practical context what both ORR and Network Rail expect from Reporters, and seeks to encourage best practice. This will help Reporters to deliver work in a way which meets these expectations and requirements. These requirements will be taken into account as part of the Reporter Framework (as provided to Reporters).
2. This guidance is owned and updated as necessary jointly by ORR and Network Rail. In the event of any discrepancy between this document and the Reporter contract, the latter will prevail. This guidance does not provide an exhaustive list of responsibilities and should Reporters wish to discuss these guidelines further they should contact the following for a trilateral discussion:
 - Andy Lewis for ORR; and
 - Jonathan Haskins for NR.

The trilateral relationship

3. Licence Condition 13 (LC13) of Network Rail network licence states:
 - “The role of the Reporter is to provide ORR with independent, professional opinions and advice relating to Network Rail’s provision or contemplated provision of railway services, with a view to ORR relying on those opinions or advice in the discharge by ORR of its functions under, or in consequence of, the Act. Where appropriate, ORR shall give the licence holder an opportunity to make representations on those opinions or advice before relying on them.”
4. Reporters should be familiar with the obligations as set out in LC13 and the terms of the contract.
5. For the avoidance of doubt, in delivering this role, ORR and Network Rail expect that Reporters will also add value to Network Rail in helping it to improve its performance and business as provider of railway services, wherever possible. However, it is recognised that this is not the primary purpose of the Reporter under the Licence and that this may not always be possible to deliver each mandate.

Role & duties of the reporters

6. Reporters must provide an independent view and remain impartial throughout the review.

For example:

- information should be shared equally and at the same time with both clients. Any correspondence or clarifications sought by Reporters should also be dealt with in the same way; and
- communication between all three parties should be open e.g. both ORR and Network Rail should be invited to or made aware of meetings or discussions even if the meeting is more appropriate with only one client.

Identifying Reporter work

7. ORR will identify instances where there is a requirement to engage a Reporter. In practical terms, this is likely to arise from on-going discussions with Network Rail and in most cases (except urgent or exceptional cases) the potential for engagement of Reporters will have been identified in advance.

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Mandates – Reporter Proposals

8. Clause 4 of the contract sets out the key requirements around provision of services. Requirements for reporter work normally arise from the day to day discussion of issues between ORR and Network Rail.
9. ORR will prepare a draft mandate for each piece of work and will in most cases agree this with Network Rail.
10. Mandates will be presented in a standard format for consistency and will clearly set out:
 - the purpose;
 - the scope;
 - why the review is necessary;
 - what it will achieve;
 - the expected outputs; and
 - timescales for providing reports.
11. Once agreed with Network Rail, ORR will email the mandate to the relevant Reporter(s), asking for comments and a proposal for the work, which should include costs and CVs for the proposed Reporter team. The Reporter has seven working days to respond with a proposal or such other timescale as determined by ORR. Every proposal must include:
 - costs;
 - resources;
 - CVs of the proposed mandate team – when providing proposals, Reporters should make the most efficient use of their resources including the most appropriate make-up of the review team;
 - methodology for delivering the aims of the mandate;
 - timescales;
 - framework of meetings, including a tripartite findings meeting before issue of the draft report;
 - expected deliverables and a concise explanation of how the aims of the mandate will be met; and
 - for larger scale reporter studies, the project management approach and project plans should be made explicit
12. Where there are multiple Reporters on a Lot, the ORR and Network Rail will use the following criteria to determine which Reporter they will select to conduct the work:

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Procedure for Call Off under the Framework Agreements

Where more than one Contractor has been selected for any particular lot, ORR and Network Rail will allocate mandates on the basis of the following criteria:

1. The expertise required is only available from one source. This may be due to ownership of exclusive design rights or patents.
2. Where the mandate constitutes follow up work, which is directly related to a recently completed study.
3. The Contractor which demonstrates the greatest expertise in the subject matter of the mandate or the approach required.
4. The Contractor's performance against the performance framework
5. An overall assessment of value for money based on cost and complexity of work.

If the ORR and Network Rail cannot determine the most appropriate Contractor for a mandate using the above criteria, ORR and Network Rail will conduct a mini-tender with the Contractors who have been awarded the relevant lot using the following criteria in order to determine the most economically advantageous proposal:

1. The Contractor demonstrates sufficient knowledge of subject matter and possesses the technical skills, resource and competencies required for the work.
2. Contractor Costs.
3. The Contractor demonstrates innovation and value for money in its proposal.
4. The Contractor's performance against the performance framework.

13. Prior to conducting such a mini-tender, ORR and Network Rail will inform Contractors of the relative weighting of the above criteria and of any additional sub-criteria applicable in the context of a particular mandate.
14. ORR and Network Rail will endeavour to discuss the proposals received and to confirm by e-mail within **five working days** that the proposal is acceptable (or otherwise). There may be circumstances where ORR and Network Rail need longer to respond.
15. ORR will then formally instruct the reporter to start work, and the reporter will arrange a start-up meeting with key representatives from both ORR and Network Rail.

Mandates – During Delivery

16. The following sets out some key points regarding conduct of any inquiry. Reporters must provide an independent view and remain impartial throughout the inquiry. They should expect to discuss their progress and findings trilaterally with ORR and Network Rail and for some challenge to be given – particularly in relation to the factual accuracy of the findings.

Costs and expenses

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17. If additional funds are required to deliver a mandate beyond those agreed at the outset, a timely proposal and justification must be given to ORR and Network Rail (as soon as the issue arises). The Reporter should notify ORR and Network Rail who will discuss and respond in a reasonable timescale. Additional work (and cost) must not proceed without approval.
18. Any reasonably incurred expenses will be reimbursed by Network Rail. Only expenses that have been incurred in accordance with Network Rail's expenses policy will be paid. It should be specifically noted that reporters must use standard class travel and plan journeys in advance as much as possible. In addition no claims for lunch will be processed even if submitted. In the event that a Reporter is working on a 'call out' during the night which takes them into the morning, the Reporter will be eligible to claim up to £7.50 for breakfast. No other scenario qualifies for claiming breakfast. Hotel accommodation costs will only be paid up to the maximum rate limit (per person per night, including VAT) as set out in Network Rail's expenses policy.
19. All invoices should be sent to Katherine Bird at Network Rail prior to being sent to Network Rail Accounts Payable.

Amendment to mandates

20. For practical reasons it may be necessary for a mandate to be revised once work has commenced or awarded. For the avoidance of doubt this will not lead to the ORR and Network Rail seeking to re-run the award of the mandate unless ORR and Network Rail agree that the revision constitutes a material change to the original mandate.

Meetings

21. Unless otherwise directed, all key meetings must be trilateral and both parties should be made aware of any other meetings taking place.
22. The Reporter should take minutes of meetings, which should be provided to all parties within 7 working days.

Issues or concerns

23. Should a situation arise whereby either ORR or Network Rail is dissatisfied with the quality of a piece of work, we will explain clearly our reasons, gain approval from the other client and then, if we deem appropriate, may request the Reporter to re-do that part of work at no additional cost.
24. Should the Reporter encounter any issues with an inquiry (review) the Reporter should notify:
 - Andy Lewis for ORR
 - Jonathan Haskins for NR

Reports

The report document

25. **All** Reports must include an 'Executive Summary' which should be written clearly, concisely and highlight key findings and key recommendations.
26. The full reports should also be written concisely in plain English, and should provide a brief 'Introduction' outlining the aims of the mandate and how these have been met. They should

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provide further detail on what is mentioned in the Executive Summary and there should not be any material points raised in the main report which have not already been mentioned in the Executive Summary.

27. Where there is commercially sensitive information in the report, the Executive Summary will be published on ORR's website, with any necessary redactions, instead of the full report. Otherwise, usually the full report will be published unless any redactions are appropriate due to a Freedom of Information Act exemption.

Recommendations

28. A recommendation is a specific action that the Reporter considers, following its analysis, should be undertaken by either Network Rail, or any other party. While the majority of recommendations are likely to be for Network Rail, not all need to be.
29. Reporters should make all recommendations SMART (Specific, Measureable, Achievable, Realistic and Timebound). The Reporter should:
- provide a clear description of the recommendation and the benefit that implementation will deliver;
 - outline the evidence which is required in order for the recommendation to be closed out; and
 -
 - discuss and agree a target date for completion of the recommendation with ORR and Network Rail.
30. Recommendations should only be included in the report if they actually add value to either ORR or Network Rail or another industry party and the benefits are sufficient to justify implementation. It is acceptable for a report not to include recommendations, as long as key requirements of the mandate have been met (e.g. if an inquiry finds that Network Rail is fully compliant with its requirements). A smaller number of well-targeted and SMART recommendations which will deliver tangible improvements is preferable to a large number of general recommendations.
31. In order to add further value, the report may also include observations on areas for improvement which do not need to be captured in a formal Recommendation if they are not central to delivery of the mandate requirements.
32. Recommendations will be tracked by the Reporter which generated them.

Payment

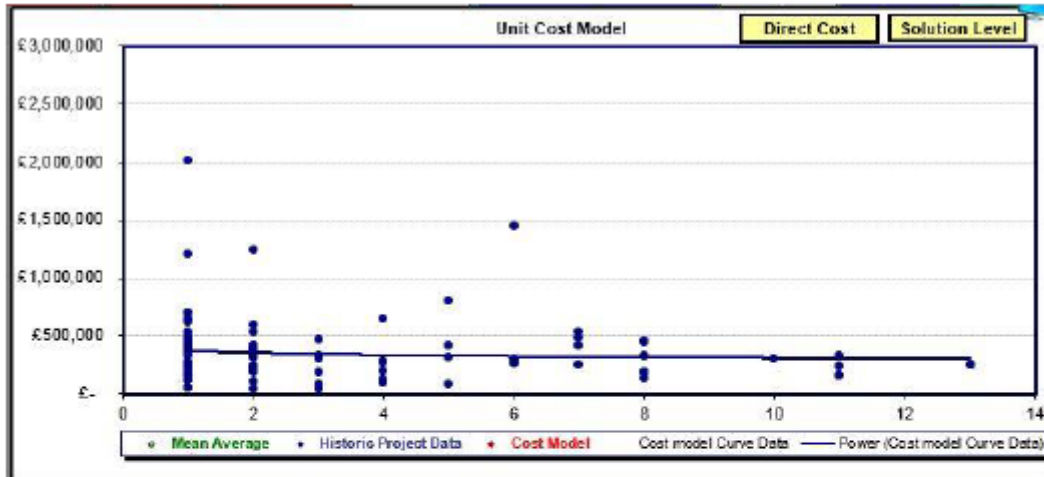
33. Reporters must include the purchase order number, and unique mandate reference (UMR) number for work when invoicing Network Rail for payment.
34. The clients can query invoices and have the right to check timesheets (and expenses) and investigate work before payment is agreed.

Post-mandate review

35. The clients will provide feedback on the work carried out, having assessed performance using the Performance Framework on a per mandate basis. This will reflect any issues or concerns raised with the Reporter during delivery of the mandate.
36. The clients will also hold formal feedback sessions with each Reporter every six months to review progress.

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Appendix 2 – Example of NR Unit Cost Model outputs



Unit Cost Analysis	Direct Unit Rate (€/UoM)	All in Unit Rate (€/UoM)	€ Direct Cost (Unit Rate x Quantity)	€ All in Cost (Unit Rate x Quantity)
Cost Model	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Mean Average	€ 362,637	€ 658,016	€ -	€ -
Min	€ 42,579	€ 45,592	€ -	€ -
Max	€ 2,015,000	€ 4,143,174	€ -	€ -
Sample Size (number of projects)	Correlation (Good model?)	R2	Data set version	Base pricing year
92	No Correlation	0.01	12P06	CP4 - 2012/13