Analysis • Forecasts • Facts / Issue 1 Winter 2010/11

ESTIMATING SERVICE BULLETIN

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Quick Comment:

• "The price of electrical materials has increased 12% during the course of this year. Our knowledge of the relationship between commodity prices and world demand for electrification is going to be important as we develop GRIP 3-4 estimates for the NEP next year."

• "Industry wage agreements and materials increases have so far been absorbed by our supply chain, either via reduced OH&P or by the business decisions necessary within a recessionary market. This means that now, many tenders look attractive against our estimates, but we mustn't lose sight that the real win will be in the outturn costs, which is what are estimates look to mimic."

Stephen Blakey - Head of Claims & Estimating, IP



Welcome to the first of Network Rail's Quarterly Estimating Bulletins. This is not only the first for this year but the first in the history of NR and as with the launch of anything new, it begs a number of questions: What is it? Why have it? Who is it for?

What is it? It is our "shop window", both internally across the business and (in time) externally to broader industry. It provides a summary of activities, facts, forecasts & analysis from industry experts on railway costs; namely our estimating teams.

Why? We have more data, in-house knowledge & experience than any other organisation. It's time to raise the awareness of what we do, why we do it and improve the contribution we make to the business through a service culture that actively disseminates our knowledge, allowing you to be better informed.

Who is it for? You, your colleagues and our internal stakeholders, which in the first instance means the leadership team within IPAM as well as senior managers from a range of disciplines including our own. But rest assured, external stakeholders & consultancies will also take an interest in what we have to say.

What do you think? This will be an iterative process where we hone the format to ensure relevant information is released, with a "spotlight" on particular assets, issues or initiatives as appropriate so consider, discuss and provide appropriate feedback as directed in the footer to each page.



The Estimating Service: Demonstrating Value

Between March & May 2010 a review was held with the Estimating Managers which asked a number of questions:

1. Where are we now?
2. What processes support what we do?
3. Who owns & maintains those processes?
4. Who are our clients & stakeholders?
5. What do we do & why do we do it?
6. What value does it bring?
7. How are we seen by internal/external stakeholders?
8. How do we want to be seen by internal/external stakeholders?
9. What do we have to do to change perceptions?
10. How do we demonstrate the value we bring?

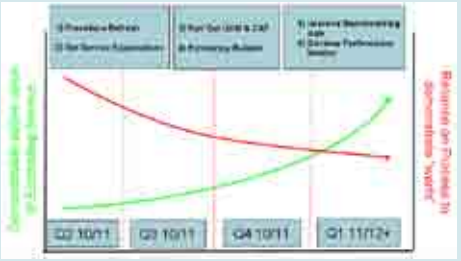
The answer to these question culminated in a six step improvement strategy:

1. **Procedure Refresh** to make them consistent, relevant & owned
2. **Set Service Expectations** with our people & our consultants
3. **Roll Out UCM & CAF** to increase awareness of good value norms
4. **Estimating Bulletin** to engage & inform our stakeholders
5. **Improve Benchmarking** to provide assurance & measure efficiencies
6. **Develop Performance Metrics** to demonstrate our service & value

Over time these six elements will become business as usual, impacting not only on how we go about estimate management plans, Grip estimates and unit cost modelling but also the expectations of others as to the value these things bring to our business and industry stakeholders.



Q8: The Quad of aims for the estimating service



Estimating Service Six Work Stream

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Retail price index

The retail prices index is still rising despite the sluggish economy, although the year-on-year increase has eased to 4.6%. (Building.co.uk)

The rate of inflation will be around 4.0% in 2010 and 3.5% in 2011 (BCIS)

NR Inflation / IOPI

NR's Planning & Regulation forecasts for RPI indicate 3% for remainder of CP4 and 2.75% thereafter.
Infrastructure Output Prices show -3.9% to 4Q09 and remain at 0% to 2Q10. Note IOPI is based on construction works only, i.e. no M&E type works

Tender Price Index

Tender prices fell by 0.5% in 2nd quarter 2010 compared with the previous quarter, and by 3.7% compared with the same quarter a year earlier (BCIS)

FORECASTS

INFLATION

NR Planning & Regulation (Retail Price Index) forecasts for RPI are as follows:

2009	2010	2011	2012	2013	2014
0.52%	1.00%	3.00%	3.00%	3.00%	2.75%

DEMAND

New work output will rise by 10% in 2010, by 0.5% in 2011 and by 1.0% in 2012 (BCIS)



LABOUR

The average wage award is expected to rise a little behind general inflation.

- Builders and Civils (CJIC) – No increase
- Electricians (England & Scotland) – 5.0%
- Steelworkers – 2.0%

MATERIALS

The annual rate of inflation for materials will be 3.2% in the year to 3rd quarter 2011 and 3.1% the year after. According to BIS, there was some significant increases in certain materials costs in 2nd quarter 2010 compared with the previous quarter. These include concrete reinforcing bars, up 23% and fabricated steelwork, up 15%. The London Metal Exchange (LME) show that steel rose by 7% in 2nd quarter 2010 compared with the previous quarter; copper fell by 3%, lead by 12% and aluminium by 3%. (BICS)



EFFECT ON NR

The effect of these prices is likely to be seen in the short term on general construction projects, particularly bridge renewals which rely heavily on these steel items. At present, the competitive nature of the civils business with tighter margins required to win work together with a certain amount of spare capacity within the industry will help offset some of this affect but we can expect tender prices to start rising throughout the winter. The effect on copper is much lower and will probably not come through to NR although this metal does fluctuate more wildly and can have a major affect on both signalling and electrification projects.

ESTIMATING NEWS - Improving Cost Knowledge for Platform Extension

The Train Lengthening Programme represents a significant part of the Enhancements Workbank for CP4. The Programme is to deliver lengthened platforms at over 200 stations on many Routes. To improve our understanding of unit costs, the Enhancements estimating team based in 40 Melton Street has established and is maintaining a dataset of project costs analysis of which will give improved understanding of unit costs and cost factors particular to platform extensions.

The analysis which will be additional and supplementary to CAF has been designed to capture data at contract award stage and to draw in historical project cost data from previous programmes and projects where lengthened platforms were constructed. The dataset will be maintained throughout the Programme and unit costs will be regularly updated and available to all groups delivering Train Lengthening projects via the National Train Lengthening Programmes Central Planning Unit."

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IP-AM	BUILDING & CIVILS	ENHANCEMENT NORTH	ENHANCEMENT SOUTH	S&T	E&P	CROSSRAIL	THAMESLINK
POPULATION (NR IN TEAM)	9	3	11	4	4	10	7
CP4 BUSINESS PLAN VALUE	£4.4bn	£4.4bn	£7.61bn	£3.15bn	£1.07bn (excl new electrification)	Crossrail £ 1 bn - tbc RSAR £630 mn	£4.3bn (CP3,4 5)
LOCATION BASE	London, Swindon Birmingha York & Glasgow	Glasgow	London Manchester York B'ham Swindon	York, Birmingham and Waterloo	York and Kings Beam	Paddington / Reading	London (JFH & Puddle Dock)
NR OF ESTIMATES TO DATE	549 (in 2010)	117	190	60	70	400 ests totalling to 2 bn SPOT cost + risk	77 (FY 10/11)
KILLER FACT	Majority of B&C projects going to tender after GRIP Stage 3	9 year contract to paint the Forth Bridge finishes in 2011 - 40 times the original build cost.	Enhancements expenditure increases during CP4 peaking in Y3 (42% increase on Y1	**Small resignalling estimates start at £10M!**	**Electrification repairs outweigh all other E&P costs**	Submitted first baselines on Reading and CrossRail with just 5 people	60,000 extra seats on Thameslink by 2017
BIGGEST HURDLE	Lack of cost data feedback due to D&B contracts	Scope definition in early stage projects	Challenge of RIB	Capturing cost breakdown information	Completeness of remits	Internal coordination	Inputs not aligned with Est Stage
BRIGHT IDEA	Uniform estimate templates across all GRIP Stages	National database of tendered rates	Developing tools within our team to improve our performance	Signalling Standard Method of Measurement	E&P SMM	Unit cost ranges worksheet	Tender evaluation in RIB
HOT TOPIC	Merging SSM7 & CESMM3 to form new B&C Contracts	Standard method of measurement for railways	Facing the challenge of CP5	New major signalling frameworks	Pricing CP5 and copper price fluctuations	Key commodity usage in G4 design	Design to Budget

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Unit Cost Models (UCM) / Cost Analysis Framework (CAF)

CAF – Network Rail's Cost Analysis Framework collects data on project spend & context to give NR an understanding of:

- Project and work unit costs for types of project works
- Effects of circumstances on project costs
- Areas for potential efficiency improvements

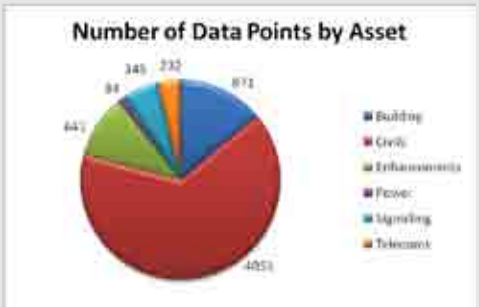
This is achieved through use of a standard cost breakdown structure to capture cost and quantity, and standard categories for defining project, "railway" environment & technical details of the project.

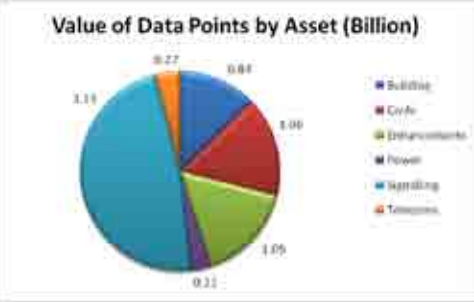
UCM – Unit Cost Models profile the data on project works and circumstances to allow comparison of current unit costs against historical and benchmark project costs for efficiency.

Unit cost data is used for Strategic and Annual Business Planning, Infrastructure Cost Model, GRIP 0/1 Budget forecasting, and validation of project estimates through Investment Authority requests.

CAF DATA

reported to Period 10P07





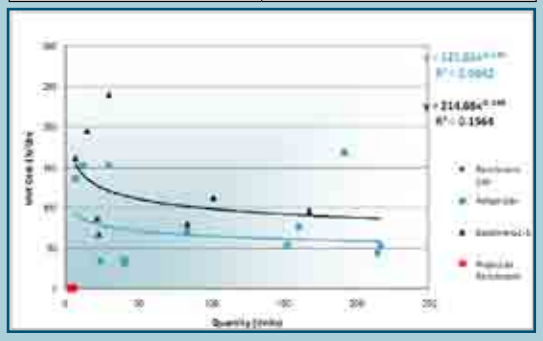
Actual Costs (CAF 7) = £3.682Bn • Baseline Costs (CAF4) = £5.137Bn

Data Points available for use in UCM: £6.544Bn

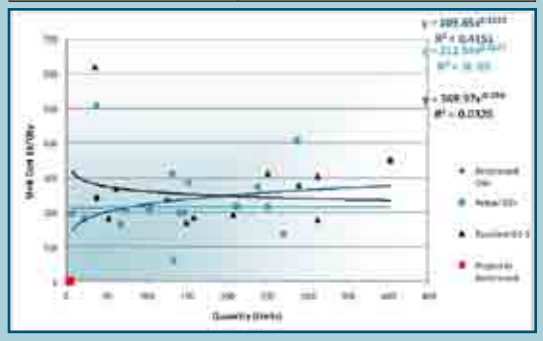
UCM

Examples for Signalling Repeatable Work Items

RWI	Interlocking (Type B2, B3)
Work Activity	Renewal
Material / Solution	Mechanical
Renewal	Number of SEU's controlled



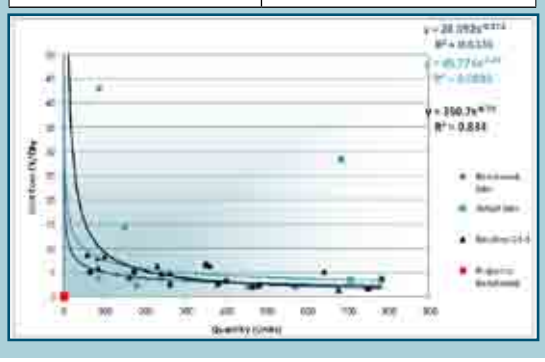
RWI	Signalling System (Type A1, A2, B1)
Work Activity	Renewal
Material / Solution	Mechanical Interlocking
Renewal	Number of SEU's controlled



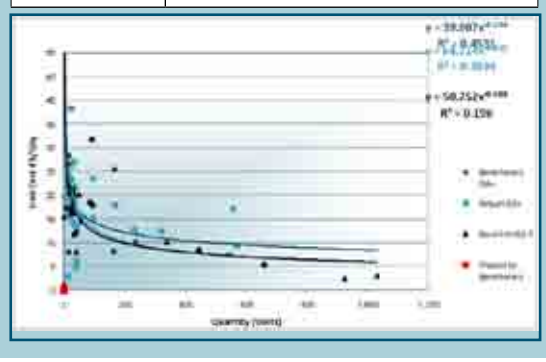
UCM

Examples for Telecomms Repeatable Items

RWI	Large Concentrator
Work Activity	Renewal
Material / Solution	PSB (Power Signal Box)
Renewal	Number of utilised lines



RWI	Station Information & Surveillance Systems (SISS)B1)
Work Activity	Renewal
Material / Solution	Existing Station
Renewal	Number of equivalent units



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