

# Talking the same language

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**Stephen Blakey explains how [Network Rail](#) is establishing a common language for the cost planning of rail works**

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Measurement is intrinsic to [RICS](#), from its origins among railway surveyors who sought consistency and comparability, to its current establishment and promotion of international standards. The measurements themselves have evolved from quantifying inputs, such as plant, labour, materials and time, to defining outputs, such as safety, operational performance, service provision and, most recently, behaviours.

Where any attempt at measurement is made, a defined terminology and taxonomy is essential. As every surveyor knows, mature construction sectors have well-established cost planning and modelling frameworks allowing funders, clients and stakeholders to make clear assessments of the value for money and cost drivers that are associated with their schemes.

These frameworks of rules and definitions are usually published by professional institutions; familiar examples include the [New Rules of Measurement suite](#) from RICS, or [Civil Engineering Standard Method of Measurement 4](#) from the [Institution of Civil Engineers](#).

## Key questions

Over the years, there has been an exponential increase in interest in the economic benefits of infrastructure investment and assuring value for money with effective commercial stewardship. This has particularly been the case in rail, where the absence of such a framework hampered the industry's ability to address 4 key questions: namely, what rail infrastructure works should cost, will cost, did cost and why.

- **Should cost:** this question concerns the ability to provide consistent and credible advice on outturn cost ranges during business planning and procurement phases.
- **Will cost:** this covers the ability to provide active commercial stewardship to influence and predict accurately the outturn costs during delivery.
- **Did cost:** this deals with the validation of outturn costs relative to final scope and constraints, client behaviours and supplier performance.
- **Why:** this seeks an illustration of segmented spend, associated cost drivers and efficiency opportunities, through informed analysis of data and benchmarking.

To provide coherent answers to these questions, a common industry language is necessary so that measurement is consistent; this also ensures that domestic and international benchmarking are both supported.

Such a language requires a standard hierarchy and set of definitions for the description, measurement, pricing and modelling of rail infrastructure works.

## Meeting the challenge

That language is provided by a suite of documents that have been developed over the last 3 years through collaboration with industry. This suite is collectively referred to as the Rail Method of Measurement (RMM), with 3 volumes envisaged:

- Volume 1: Cost Planning & Measurement of Rail Infrastructure Works
- Volume 2: Standard Rail Activity Cost Models
- Volume 3: Cost Planning & Measurement of Maintenance to Rail Infrastructure.

By convening an Industry Development Group to consider the views of more than 40 bodies, including some of the professional institutions, industry stakeholders and supply chain operators shown in Figure 1, we have focused on refining and publishing Volume 1.



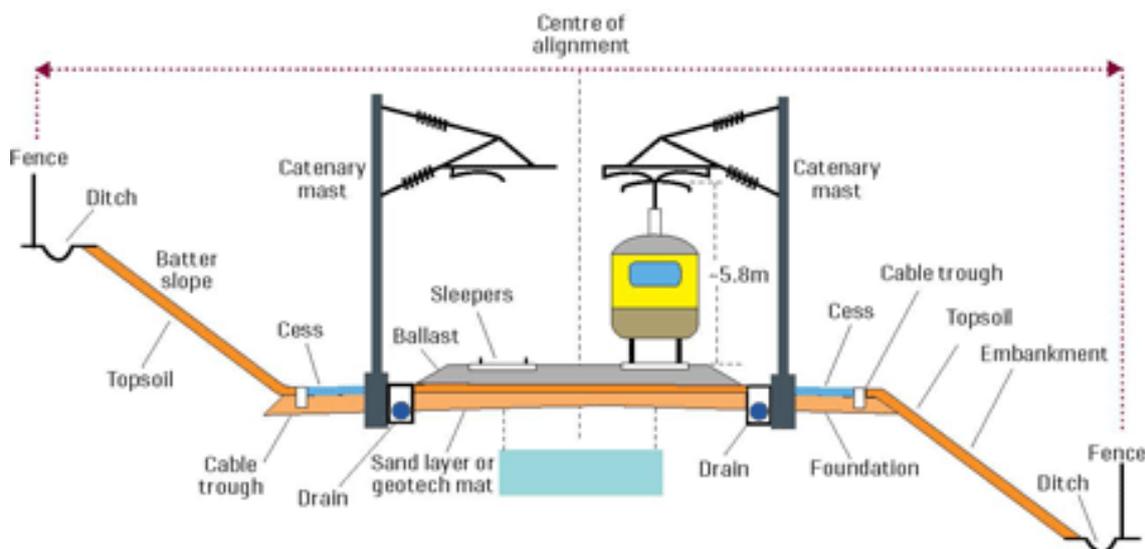
**Figure 1. RMM: Commercial Directors Forum and Industry Development Group members**

## Familiar territory

The structure of Volume 1 will feel familiar to any practising quantity surveyor, and provides a logical and structured basis for planning, measurement and modelling of the cost of railway work. From an industry perspective, it should be seen as representing good if not best practice.

The rules deal with measurement for preparing early order-of-magnitude cost plans and estimates, pricing schedules, cost models, benchmarking and analysis, and provide standard definitions for a range of cost categories, group elements, subelements and components.

Produced in a tabular format, items have coverage rules, measurement rules, and definitions to help the practitioner work to a level of granularity appropriate to each project's maturity and form of contract. In addition, the industry concept of working in a 'railway corridor' is reinforced and defined, setting the parameters in which the majority of our work will be planned and completed (see Figure 2).



**Figure 2. The railway corridor: cross-section of double-track railway alignment, including an overhead power supply system**

The contents of Volume 1 are:

- 1. Direct Construction Works**
  - 1.01 Railway Control Systems
  - 1.02 Train Power Systems
  - 1.03 Electric Power and Plant
  - 1.04 Permanent Way
  - 1.05 Operational Telecommunication Systems
  - 1.06 Buildings & Property
  - 1.07 Civil Engineering
  - 1.08 Enabling Works
  - 1.09 Rolling Stock
  - 1.10 Building Service
- 2. Indirect Construction Costs**
  - 2.01 Preliminaries
  - 2.02 Overheads and Profit
- 3. Project/Design Team Fees and Other Project Costs**
  - 3.01 Design Team Costs
  - 3.02 Project Management Team Costs
  - 3.03 Other Project Costs
- 4. Risk**
  - 4.01 Total Risk Allowance
- 5. Inflation**
  - 5.01 Inflation
- 6. Taxation and Grants**
  - 6.01 Tax Allowances and Grants.

Rail industry practitioners will also have a sense of familiarity with these as RMM has been incrementally deployed in our business and through our supply chain for some 18 months in the form of an industry consultation version. In a similar vein, stakeholders such as the Office of Rail Regulation are already attuned to RMM and now expect relevant funding submissions to be in this format as standard.

We therefore know it works and has industry support, and intend to release a first edition of Volume 1 by the end of the year, with Volume 2 to follow in 2017.

*Network Rail's focus is on promoting consistency and clarity of costs through standard approaches to measurement, cost modelling and benchmarking*

In parallel, Network Rail has been developing a unit-cost modelling capability with a data architecture directly aligned with the RMM. We are aiming for increasingly effective cost capture and analysis of UK rail works so the industry is better informed ? a Rail Cost Information Service, if you will.

Clearly, the successful adoption of RMM will, in time, enhance the ability of the industry to demonstrate value for money, improve the capital cost dynamics of rail infrastructure schemes and enable whole-life costing as well as greater transparency and consistency.

There are of course perennial issues to be addressed in meeting this aspiration: resource, skills, competencies and practitioners' appetite to measure diligently at appropriate levels of granularity. But I am confident that, with the support of the Industry Development Group and other interested stakeholders, our efforts will prove fruitful.

And we are not alone in such endeavours. You only need look at RICS' aspirations regarding the International Construction Measurement Standards to see a global approach to the very same issues: the establishment of a common language and framework to enable consistent answers to those 4 key questions. Through its Infrastructure Steering Group and other forums, RICS, supported by informed clients such as Network Rail, is perfectly placed to develop and deploy such a language.

Network Rail's focus is on promoting consistency and clarity of costs through standard approaches to measurement, cost modelling and benchmarking. Our journey continues.

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## **Further information**

For an insight into progress and to access the current version of RMM, visit [Network Rail](#)

Related competencies include:

- [Commercial management of construction](#)
- [Quantification and costing of construction works](#)

This feature was taken from the RICS *Construction journal* (November/December 2016)