

Monitoring, reviewing and control of budgeted or agreed costs for construction projects, including reporting past performance and predicting future performance. Provision of financial assistance and statistical methods for analysing data in regard to the economics of a construction project. Risk analysis and allocation.

Range Indicators

Competency will be demonstrated in the application of relevant knowledge, understanding and skills set out in the cost engineering competency requirements. Such knowledge and skills will normally be obtained through a structured education and training and development to the requisite level and appropriate work experience.

This area of specialism includes the following core skills:

- To be able to demonstrate knowledge and experience of the use of financial control procedures.
- To be able to demonstrate knowledge and experience of the preparation of activity schedules, resource schedules and analyse tender documents.
- To be able to demonstrate knowledge and experience of contract structures and documentation.
- To be able to demonstrate knowledge and usage of Civil Law in the context of construction.
- The ability to prepare and use construction programmes, analyse and prepare contractual claims.
- To be able to demonstrate knowledge and experience to gather data and carryout research on current construction costs and future implications of various options.
- To be able to demonstrate knowledge and experience of the principles of cost management and elemental cost analysis including life cycle implications where required.
- To be able to demonstrate knowledge of construction techniques, sustainable and environmental construction and practical application of health and safety on site.
- To be able to demonstrate knowledge and experience of the use of commercial management and administration skills.
- To have an understanding of both macro and micro economic factors that affect the construction industry.

Communication, computing and health and safety skills apply to all specialisms and are described elsewhere.

All applicants for Technical Membership are required to satisfy these levels of competence.

Evidence Guide

Evidence of successful achievement of this competency would be effective and efficient management of the cost management process together with the application of appropriate systems for monitoring and reporting of cost data, at the minimum levels as stated in the competency details.

TECHNICAL MEMBER COMPETENCIES – COST ENGINEERING

	Competency	The ability to use financial control procedures encountered within the industry.				
CM29	Optimum Standard	Activity Details	Date of Assessment			
			A	K	E	B
A	K	Analysis of tender budget information.				
B	K	Preparation of profitability forecasts and cash flow.				
C	K	Collation of cost and value information.				
D	A	Company accounting system(s).				
E	K	Cost planning and pre-contract cost control.				
F	K	Analyse and advise on various alternative design solutions.				
G	K	Establish project cost objectives and parameters.				
		Supervisor's signature:	Date:			

		Demonstrate the ability to measure, record and value work in accordance with appropriate rules.				
CM30	Optimum Standard	Activity Details	Date of Assessment			
			A	K	E	B
A	K	Preparation of estimates, schedules of rates and Activity schedules.				
B	K	Preparation and submission of cost reports.				
C	E	Measurement of the works and agreements with client and subcontractors.				
D	K	Formulation and agreement of contemporary records.				
E	K	Preparation and negotiation of claims.				
F	K	Develop cost components, unit rates and productivity factors.				
		Supervisor's signature:	Date:			

		Demonstrate knowledge and experience of contract structure and documentation.				
CM31	Optimum Standard	Activity Details	Date of Assessment			
			A	K	E	B
A	K	Preparation of estimates and tender submissions.				
B	K	Interpretation of specifications and preambles.				
C	K	Risk analysis.				
D	K	Analysis of drawings, technical reports and bills of quantities.				
E	K	A sound working knowledge of the various forms of conditions of contract used for civil engineering projects.				
		Supervisor's signature:	Date:			

	Competency	Demonstrate knowledge and usage of civil law in the context of construction.				
CM32	Optimum Standard	Activity Details	Date of Assessment			
			A	K	E	B
A	K	Knowledge of construction and contract law.				
B	A	Advising on contractual matters and formulating correspondence.				
C	A	Understanding of disputes resolution.				
D	A	Understand the provisions of the standard forms of contract and sub-contract commonly in use in the civil engineering industry.				
E	K	The health and safety at work and environmental health acts.				
		Supervisor's signature:	Date:			

	Competency	Demonstrate knowledge and ability in planning and programming.				
CM33	Optimum Standard	Activity Details	Date of Assessment			
			A	K	E	B
A	K	Preparation of various types of construction programmes.				
B	K	Use of the programme for: A) Planning the works.				
C	K	Ditto: B) Analysis and preparation of extension of time and disruption claims.				
D	K	Benchmarking and performance indications (Key Performance Indicators).				
E	E	Resource scheduling and management.				
F	K	Prepare project implementation and procurement plan.				
G	K	Prepare cost plan.				
		Supervisor's signature:	Date:			

	Competency	Demonstrate appreciation and knowledge of construction techniques and uses of technology.				
CM34	Optimum Standard	Activity Details	Date of Assessment			
			A	K	E	B
A	K	Construction techniques with particular emphasis upon projects with which personally involved.				
B	E	Working knowledge of plant, equipment, materials and labour.				
C	A	Sustainable engineering and environmentally friendly construction.				
D	K	Practical application of health and safety on site.				
E	K	Modelling and testing procedures.				
		Supervisor's signature:	Date:			

	Competency	Demonstrate the ability to understand and use commercial management and administration skills.				
CM35	Optimum Standard	Activity Details	Date of Assessment			
			A	K	E	B
A	K	Preparation of internal reports.				
B	A	Management, selection and control of sub-contracts and finances, including disputes settlement.				
C	A	Representation of the financial and contractual interests of your employer/client in progress meetings or the like.				
D	A	The principles of insurance, including professional indemnity and the handling of insurance claims.				
E	K	Analysis of rates and prices, agreement of variations and or compensation events.				
F	K	Administration of quality assurance procedures.				
G	A	Co-ordination of buying, accounts, production control/planning. Supply chain management and procurement techniques, estimating and surveying functions.				
H	E	A working knowledge of labour costs, employment legislation and working rule agreements.				
		Supervisor's signature:				
		Date:				