

Chapter 2 Introduction

- 2.01 It is important to recognise that the preparation of tender is a total process which includes the three functions of 'Measuring', 'Estimating' and 'Tender Finalisation'.
'Measuring' is the process of physically quantifying the functions and quantities of materials in a project.
'Estimating' is the technical process of predicting costs of construction.
'Tender Finalisation' is a subsequent commercial function based upon the estimate.
- 2.02 It must also be recognized that the three functions necessarily overlap and in practice may be carried out by one person in a small firm or a team in a large organization. The estimator must be aware of all three functions even if, not primarily responsible for measuring and tender finalisation.
- 2.03 This Guide is concerned only with the function of Estimating i.e. the proper Preparation of the cost (1.03) of projects using Bills of Quantities measured in accordance with the Australian Standard Method of Measurement of Building Works or other agreed method of measurement, and provided by a consultant Quantity Surveyor. Management is responsible for providing information on previous costs, production outputs, building techniques and clerical assistance which are essential pre-requisites of good estimating practice. Management is also responsible for conversion of estimates into tenders and obtaining work. If the Bills of Quantities are not provided as part of the tender documents, quantities must be taken off by the Builder's Quantity Surveyor before the procedures recommended in this Guide can be used. Due allowance must be made in the estimator's rates for any Builder's alternative method of measuring.
- 2.04 This guide primarily refers to the process of tendering applicable to traditional lump sum contracts. However, due to the use of alternative forms of contract which are often based on preliminary type documents, a changed approach to traditional estimating practice becomes evident.
- 2.05 Alternative forms of contract include, but are not limited to:-
- a. Design and Construct
 - b. Guaranteed Maximum Price
 - c. Construction Management
 - d. Project Management
 - e. Novational
- 2.06 An estimate must be prepared in a way that is explicit and consistent and which takes account of methods of construction and all circumstances which may affect the execution of work on the project. It is believed that such a sound estimate can only be achieved when each operation or item is analysed into its simplest elements and the cost estimated methodically on the basis of factual information.

- 2.07 It is expected that the methods described will be suitable for use by those estimating for every type of building work. Some, whose work is in smaller or specialised fields, may be able to simplify the procedures, but the essential sequence of tasks and the ways in which information is sought and collated will not be changed.
- 2.08 The use of ordered and logical methods of estimating has important and far-reaching effects. The extent of possible future demands on resources can be readily appreciated. The estimate, in conjunction with the project programme, provides a means of measuring the financial consequences of any delays that may occur during the execution of the project. Comparisons can be made between estimated and actual levels of productivity and control action taken when required. Estimators should work in close association with construction management. The basis on which estimates have been prepared should be explained and information allowed to flow freely in both directions.
- 2.09 THE FUNDAMENTAL PRINCIPLE IS THAT AN ESTIMATE SHOULD BE PREPARED NET, TAKING INTO CONSIDERATION THE CONSTRUCTION METHODS, THAT IS, IT SHOULD BE AN ESTIMATE OF COST (1.03), WITHOUT ANY ADJUSTMENT FOR OVERHEAD AND PROFIT.
- 2.10 PRELIMINERIES (1.03) SHOULD BE ADDED AFTER A CONSTRUCTION PROGRAMME HAS BEEN DETERMINED AND THE TOTAL VALUE OF THE MEASURED WORK HAS BEEN OBTAINED. ALLOWANCES FOR RISK, HEAD OFFICE OVERHEADS (1.03) AND PROFIT SHOULD BE ADDED BY MANAGEMENT AT THE TIME OF TENDER FINALISATION.
- 2.11 THE WAY IN WHICH THESE ALLOWANCES ARE INCORPORATED INTO THE PRICED BILLS OF QUANTITIES, AFTER BEING AWARDED THE CONTRACT, IS THE SUBJECT OF A POLICY DECISION OF MANAGEMENT (7.03a).
- 2.12 It can be seen from the network diagram 'Procedure for Estimating and Tendering' (Annex E) that the processes fall logically into five discernible stages. These stages form the subjects of Chapters 3 to 7 of this Guide as follows:

Chapter 3: Management decides whether to accept or decline an invitation to tender.

Chapter 4: Estimator gathers the information required and familiarises himself with the project.

Chapter 5: An estimate of the cost of the project is prepared.

Chapter 6: Management finalises the estimate and submits a tender

Chapter 7: If the tender is accepted, all relevant information is passed to construction management and information on actual cost is fed back for guidance in future estimating.

2.13 The following list of other references relevant to this subject is not exhaustive:

Browne PW, An Analytical Approach to Construction Estimating, University of NSW Press, 1985

Clarke, F V, Analytical Building Estimating, Macarthur Estimating Services, revised 1989

Geddes, Estimating for Building & Civil Engineering Works, 8th edition,
Edited by G Chrystal Smith and P Jolly, Butterworths, 1985

Mudd, D R, Estimating and Tendering for Construction Work, Butterworths, 1984

O'Neill, LV, Fundamentals of Estimating and Construction Cost Control, Tait, 1966

Rawlinsons, Australian Construction Handbook

Smith R C, Estimating and Tendering for Building Work, Longman Scientific & Technical, 1986