BUILDING ECONOMICS

appraisal and control of building design cost and efficiency

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BUILDING ECONOMICS

appraisal and control of building design cost and efficiency

IVOR H. SEELEY

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Emeritus Professor of The Nottingham Trent University

Third Edition

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PREFACE

This book critically examines and applies to practical situations the various methods of controlling the cost of buildings at the design stage, which have as their main aim the securing of maximum value for money and a tender which is within the agreed cost limit. In order to implement effective cost control it is necessary to understand fully the various factors which bear upon building prices and to take both present and future costs into account. The subject area thus forms an important facet of quantity surveying, being an activity which is concerned primarily with economic efficiency and value for money.

Tony Brett-Jones has described how quantity surveyors are now able to exercise an important and valuable professional skill in giving independent cost advice, which can be used for budgeting, cost planning and cost control. The quantity surveyor's role, as defined in the RICS report on the future role of the quantity surveyor issued in 1971 and reiterated in *Surveying in the Eighties* report in 1980 is to ensure that the resources of the construction industry are utilised to the best advantage of society by providing *inter alia* the financial management for projects and a cost consultancy service to client and designer during the whole construction process. The distinctive competence of the quantity surveyor is a skill in measurement and valuation in the field of construction, in order that such work can be described and the cost and price be forecast, analysed, planned, controlled and accounted for.

As long ago as 1957, the late William James described how the continually rising cost of building, growing at a faster rate than that of manufactured goods, caused clients to feel that the building industry, and its allied professions, were inefficient. In consequence, a building client was inclined to be incredulous of realistic cost forecasts and to require from his professional advisers both an increasing measure of cost explanation and an ever greater attention to cost efficiency in design. Since that time building clients have become more knowledgeable with more sophisticated requirements, and

they now demand a much wider range of expert cost advice than quantity surveyors were accustomed to giving in the past. In particular they require an overall appraisal of the alternatives available to them, to enable decisions to be soundly based economically. Hence there has developed a pressing need to refine the tools of cost prediction and control, and for the quantity surveyor to possess a much wider knowledge of factors influencing costs and other related development aspects; this book seeks to meet these needs. It also aims to provide extensive coverage of the final examination requirements of the Royal Institution of Chartered Surveyors (Project Cost Control and Project Development). It will be of assistance to those studying Economic and Quantitative Analysis in the final examinations of the Chartered Institute of Building. It should also prove to be of value to those proceeding to degrees and diplomas in quantity surveying, building economics and building.

In addition, it is felt that the book will be of considerable use to practising quantity surveyors as a handy means of reference, whilst architects, building surveyors, property managers and contractors may find much of interest within its pages.

Metric units have been used throughout. Readers wishing to familiarise themselves with the relative values of metric and imperial measures may find the metric conversion table in appendix 6 helpful. On the drawings, all dimensions in metres are shown with a decimal marker, while all other sets of figures represent millimetres. This procedure eliminates need for the use of the 'm' and 'mm' symbols for dimensions on drawings.

Economists might argue with some justification that the book is more concerned with *building economy* than *building economics*. Nevertheless, the term building economics has been widely used by the quantity surveying profession to describe the investigation of factors influencing building cost, with particular reference to the interaction of building design variables. Furthermore, this study extends much further

to embrace such matters as the economics of building development, costs in use, land use and value determinants, and environmental economics, and in addition investigates the

methods available for controlling building prices.

I. H. SEELEY

Nottingham

Spring 1972

PREFACE TO THIRD EDITION

Changing economic, technological, social and statutory requirements have made it necessary to rewrite considerable parts of the text. At the same time the opportunity has been taken to generally update the book, omit parts which are of minimal significance, to extend the worked examples and to include information on latest developments and techniques. The section on post-contract cost control has been extended considerably while the costs in use chapter has been widened to encompass energy conservation and life cycle costing. Increased emphasis has also been given to urban renewal. In general the main aim throughout the rewriting was to

extend its usefulness to the reader. Unfortunately, fluctuating building prices and interest rates will continue to affect the rates and prices included in the text, which were mainly those operative in mid-1982. Hence these should be taken as guidelines and are used primarily to show the principles and techniques involved. In practice current local rates and prices will need to be used.

I. H. SEELEY

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The author has been influenced by the valuable work undertaken by the pioneers in building design cost control techniques and has profited immensely from their investigations. In this connection the names of the late William James, CBE, FRICS, PPCI Arb; James Nisbet, FRICS; P. W. Grafton, CBE, PPRICS; and Cyril Sweett, FRICS immediately come to mind. It would also be appropriate to make reference to the valuable groundwork in costs in use carried out by Dr. P. A. Stone. In addition, the author has benefited immeasurably from the work of the Wilderness Group, the BCIS management committee, the Department of Education and Science, Department of Health and Social Security, National Economic Development Council and the Department of the Environment, and has drawn freely from their findings. Valuable information has also been obtained from the RICS journals, *Building*, the *Architects' Journal* and the Nationwide Building Society, for which the author is most grateful.

The RICS Building Cost Information Service and Building Maintenance Cost Information Service kindly agreed to the use of cost analyses and other relevant cost information, and the following design teams have also made valuable information available, without which it would have been extremely difficult to have incorporated really meaningful case studies and other relevant cost data.

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'It is unwise to pay too much; but it is worse to pay too little.'
John Ruskin

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