BUILDING ECONOMICS

appraisal and control of building design cost and efficiency

By the same author

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BUILDING ECONOMICS

appraisal and control of building design cost and efficiency

by

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First published 1972

Reprinted 1973, 1974 (twice)

Second edition 1976

Published by

THE MACMILLAN PRESS LTD

London and Basingstoke

Associated companies in New York Dublin

Melbourne Johannesburg and Madras

ISBN 978-0-333-19869-8 ISBN 978-1-349-03068-2 (eBook)

DOI 10.1007/978-1-349-03068-2

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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 (Chapter 8, reference 27) 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, 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, 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, was 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 cover the current examination requirements of the Royal Institution of Chartered Surveyors and the Institute of Quantity Surveyors in Building Economics and Cost Planning, and to give extensive coverage of Project Cost Control and Project Development in the 1972 RICS final examination syllabuses. It will be of assistance to those studying Economic and Quantitative Analysis in the new associate membership Parts I and II examinations of the 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 and where rationalised metric sizes have not yet been decided, equivalent metric dimensions have been incorporated. 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

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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 SECOND EDITION

ESCALATING BUILDING COSTS and changes in legislation have made it necessary to produce a second edition. The opportunity has also been taken to improve the text where considered desirable and to extend graphs and tables.

Unfortunately building costs are still rising at a significant rate, mainly because of the increasing cost of labour and materials, and it is not possible at the time of writing to project costs beyond the end of 1975. In like manner interest rates are fluctuating considerably and those used in the worked examples should be taken as guides and not necessarily the current operative rates.

I. H. SEELEY

Nottingham
Summer 1975

ACKNOWLEDGEMENTS

THE AUTHOR acknowledges with gratitude the willing co-operation and assistance received from the many organisations and individuals over a period of many years, so many that it is not possible to mention them all individually.

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 William James, CBE, FRICS, PPIA_{rb}; James Nisbet, FRICS; P. W. Grafton, FRICS; 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 former RICS Cost Research Panel, the BCIS management committee, the former Ministry of Education, and the Department of the Environment, and has drawn freely from their findings.

The RICS Building Cost Information Service, through the good offices of Douglas Robertson and Patrick Amos, 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:

T. H. Thorpe and Partners, Architects and Quantity Surveyors, Derby.

White, Cooper and Turner, Architects, 314 High Holborn, London W.C.1.

S. Hardy, Dip. Arch, ARIBA, Regional Architect, British Rail, Eastern Region and R. P. H. Brind, FRICS, Chief Quantity Surveyor; in collaboration with Turner and Holman, F/ARICS, F/FIQS, FIA_{rb}, Chartered Quantity Surveyors, Museum Street, York.

H. Rackham, CEng, FIMunE, MIHE, City Engineer, Surveyor and Planning Officer, City of New Sarum.

Brian Bunch, ARIBA, MRTPI, Chief Architect and R. Taylor, FRICS, Chief Quantity Surveyor to Redditch Development Corporation.

Auburn, Ainsley and Partners, Chartered Quantity Surveyors, Rotherham, Yorkshire.

The author is also indebted to the Controller of Her Majesty's Stationery Office for permission to reproduce figures 13, 14 and 15 from *Flats and Houses*, 1958, and to Ronald Sears for producing the final drawings of such outstanding quality. Certain data in chapter 14 have been extracted from other works by the author, namely *Municipal Engineering Practice* and *Planned Expansion of Country Towns*. Finally, grateful thanks are due to the publishers for abundant help and consideration throughout the production of the book, and the thoughts and ideas expressed by members of the staff of the Department of Surveying at Trent Polytechnic were most welcome.

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