Macmillan Building and Surveying Series

Series Editor: Ivor H. Seeley

Emeritus Professor, The Nottingham Trent University

Advanced Building Measurement, second edition Ivor H. Seeley

Advanced Valuation Diane Butler and David Richmond

Applied Valuation Diane Butler

Asset Valuation Michael Rayner

Building Economics, fourth edition Ivor H. Seeley

Building Maintenance, second edition Ivor H. Seeley

Building Maintenance Technology Lee How Son and George C.S. Yuen

Building Procurement, second edition Alan E. Turner

Building Project Appraisal Keith Hutchinson

Building Quantities Explained, fourth edition Ivor H. Seeley

Building Services George Hassan

Building Surveys, Reports and Dilapidations Ivor H. Seeley

Building Technology, fifth edition Ivor H. Seeley

Civil Engineering Contract Administration and Control, second edition

Ivor H. Seeley

Civil Engineering Quantities, fifth edition Ivor H. Seeley

Commercial Lease Renewals Philip Freedman and Eric F. Shapiro

Computers and Quantity Surveyors Adrian Smith

Conflicts in Construction: Avoiding, Managing, Resolving Jeff Whitfield

Constructability in Building and Engineering Projects Alan Griffith and

Tony Sidwell

Construction Contract Claims Reg Thomas

Construction Economics: An Introduction Stephen L. Gruneberg

Construction Law Michael F. James

Contract Planning and Contractual Procedures, third edition B. Cooke

Contract Planning Case Studies B. Cooke

Cost Estimation of Structures in Commercial Buildings Surinder Singh

Design-Build Explained David E.L. Janssens

Development Site Evaluation N.P. Taylor

Economics and Construction Andrew J. Cooke

Environmental Management in Construction Alan Griffith

Environmental Science in Building, third edition R. McMullan

Estimating, Tendering and Building for Construction A.J. Smith

European Construction: Procedures and Techniques B. Cooke

and G. Walker

Facilities Management: An Explanation J. Alan Park

Greener Buildings: Environmental Impact of Property Stuart Johnson

Housing Associations Helen Cope

Housing Management: Changing Practice Christine Davies (editor)

Information and Technology Applications in Commercial Property

Rosemary Feenan and Tim Dixon (editors)

Introduction to Building Services, second edition

Christopher A. Howard and Eric C. Curd

Introduction to Valuation, third edition David Richmond

Marketing and Property People Owen Bevan

Measurement of Building Services G.P. Murray

Principles of Property Investment and Pricing, second edition W.D. Fraser

Project Management and Control D.W.J. Day

Property Development: Appraisal and Finance David Isaac
Property Finance David Isaac
Property Management: A Customer Focused Approach Gordon Edington
Property Valuation Techniques David Isaac and Terry Steley
Public Works Engineering Ivor H. Seeley
Quality Assurance in Building Alan Griffith
Quantity Surveying Practice, second edition Ivor H. Seeley
Real Estate in Corporate Strategy Marion Weatherhead
Recreation Planning and Development Neil Ravenscroft
Resource Management for Construction M.R. Canter
Small Building Works Management Alan Griffith
Structural Detailing, second edition P. Newton
Sub-Contracting under the JCT Standard Forms of Building Contract
Jennie Price
Urban Land Economics and Public Policy, fifth edition P.N. Balchin,
J.L. Kieve and G.H. Bull
Urban Renewal: Theory and Practice Chris Couch
Value Management in Construction: A Practical Guide Brian R. Norton and
William C. McElligott
1980 JCT Standard Form of Building Contract, second edition R.F. Fellows

Macmillan Building and Surveying Series

Series Standing Order ISBN 978-0-333-69333-9

You can receive future titles in this series as they are published by placing a standing order. Please contact your bookseller or, in the case of difficulty, write to us at the address below with your name and address, the title of the series and the ISBN quoted above.

Customer Services Department, Macmillan Distribution Ltd
Houndmills, Basingstoke, Hampshire RG21 6XS, England

Building Procurement

Second Edition

Alan Turner

© Alan E. Turner 1990, 1997

All rights reserved. No reproduction, copy or transmission of this publication may be made without written permission.

No paragraph of this publication may be reproduced, copied or transmitted save with written permission or in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency, 90 Tottenham Court Road, London W1P 9HE.

Any person who does any unauthorised act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

The author has asserted his rights to be identified as the author of this work in accordance with the Copyright, Designs and Patents Act 1988.

First edition 1990

Reprinted 1994

Second edition 1997

Published by
MACMILLAN PRESS LTD
Houndmills, Basingstoke, Hampshire RG21 6XS
and London
Companies and representatives
throughout the world

ISBN 978-0-333-68809-0

ISBN 978-1-349-14398-6 (eBook)

DOI 10.1007/978-1-349-14398-6

A catalogue record for this book is available
from the British Library.

This book is printed on paper suitable for recycling
and made from fully managed and sustained forest sources.

10	9	8	7	6	5	4	3	2	1
06	05	04	03	02	01	00	99	98	97

Contents

<i>List of Diagrams</i>	vii
<i>Preface to the First Edition</i>	ix
<i>Preface to the Second Edition</i>	xiii
<i>Acknowledgements</i>	xvii

PART 1

1 REASONS FOR BUILDING	3
Three fundamentals	3
Why?	4
Clients	5
Objectives of building clients	7
Property	12
Development process	13
Summary	18
2 DECIDING TO BUILD	20
Seven steps to successful building procurement	20
Summary	27
3 RELATIONSHIPS OF PARTIES	30
How the parties evolved	30
The present state of evolution post-Latham	34
Relationship of parties	43
Summary	50
4 PROCUREMENT OPTIONS	51
Design combined with construction: design and build	53
Design combined with construction: design and manage	61
Design separate from construction: traditional ('lump sum')	63
Design separate from construction: management	66
Frequency of use of procurement options	74
Summary	76
5 CHOOSING THE ROUTE	78
Procurement assessment criteria (PAC)	78
How the procurement decision is made	102
Summary	104

6	CONTRACTS AND CONDITIONS	105
	Introduction	105
	The influence of Latham	105
	Contracts	108
	Contracts for professional services	109
	Contracts for building	112
	Types of contract	118
	Contracts where design is combined with construction	
	– design and build procurement	118
	Contracts where design is separate from construction	
	– traditional ('lump sum') procurement	120
	Contracts where design is separate from construction	
	– fee management procurement	123
	Collateral warranties	124
	Tendering	127
	Summary	130
PART 2		
7	CASE STUDIES	133
	Introduction	133
	Case study 1 Supermarket	136
	Case study 2 City offices, shopping and leisure facilities	142
	Case study 3 Hotel extensions	146
	Case study 4 Civic hall and theatre	151
	Case study 5 Offices	156
	Case study 6 Factory	160
	Case study 7 Department store renovation/new construction, shopping units, offices and multi-storey car park	163
	Case study 8 Hospital	169
	Case study 9 Prestige building for government agency	171
	Case study 10 Shopping centre redevelopment	176
	Case study 11 Clinic	179
	Case study 12 Shopping centre renovation	186
	Case study 13 Golf country club	189
	Case study 14 Church rebuilding for St Dunstan's	192
	General lessons	197
	Cases: relative success/failure of procurement route adopted	199
	<i>Glossary</i>	200
	<i>Index</i>	205

List of Diagrams

1.1	Cycle of land use, development appraisal, demolition, construction, maintenance and reappraisal	19
2.1	Building procurement process	28
3.1	Range of organisational variations for project management, design and construction	44
3.2	Design and build contracting: contractual relationships	45
3.3	Design and manage (contractor): contractual relationships	46
3.4	Design and manage (consultant): contractual relationships	47
3.5	Traditional contracting: contractual relationships	48
3.6	Management contracting: contractual relationships	49
3.7	Construction management: contractual relationships	50
4.1	Components of the design and build system	55
4.2	Components of the traditional system (sequential)	64
4.3	Components of the traditional, two-stage system (accelerated traditional)	65
4.4	Components of the management system	70
5.1	The balance of product, programme and price	79
5.2	Identifying your priorities	80
5.3	Assessment of risk between the procurement routes	86
5.4	Change in price certainty during the life of a project	98
6.1	Procurement risks and characteristics of types of building contracts	115
6.2	General contractual and tortious relationships of organisations	126
6.3	General contractual relationships of organisations, including those established by collateral warranties	126

Preface to the First Edition

'Building procurement' has become a fashionable subject. It seems that hardly a week goes by without my receiving a note that a student is writing a dissertation on an apparently new angle to the subject or that a course, conference, seminar or whatever is offering to explain the challenge of construction procurement now and in the future. Consultancies and contractors who should know better words are using four-letter words, like 'best', in hyping the arena by offering to reveal 'which method of building procurement is best'.

Definition of terms as always is important.

'Building' is or should be easy – the dictionary at its simplest says (i) something built with a roof and walls and (ii) the act, business, occupation or art of building things (that is, houses, offices, boats and the like).

'Construction' is the business or work of building houses, offices, factories and so on. Building and construction are for all practical purposes virtually synonymous.

'Procurement' should also be easy but it is less familiar. When I was a boy procurement was not a word often, if ever, used by quantity surveyors or, I think, regularly by anyone else in the construction industry. Standard textbooks such as *Elements of Quantity Surveying* and *More Advanced Quantity Surveying* by A.J. Willis did not even contain the word, presumably because procurement was not then an element of quantity surveying or of any other building activity at ordinary or advanced level.

The dictionary defines 'procure' as to obtain or to acquire; to secure. 'Procurement' is the act of obtaining/acquiring or securing. It has of course long been used in a context relating to activities associated with a profession much older than building or any of its professions.

Procurement as an activity in commerce and industry has come to mean purchasing – the tendering and selection systems required to obtain anything from paper clips to power stations. Increasingly organisations of any size have 'facilities departments' and 'procurement directors/managers' who look at their requirements and how to buy them. In the property/construction process it is now becoming quite common to work with a procurement officer and to agree with him how best to go about satisfying his 'requirements for facilities'.

A person who wants a building must travel through the process of building procurement. As with travel generally, it must sometimes appear to the building owner, to the ultimate client, that the other par-

ticipants in the journey, the consultants and contractors, who are there after all to help him in acquiring his building, are sometimes themselves more intent on travelling hopefully on their own separate journeys than on arriving at the client's, or even at their own, journey's end. But more of this in travelling through the book itself.

It may already be clear to the reader from my first paragraph that I believe there is no 'best' procurement route; that the client and his priorities for the particular project generally lead to some routes being better than other routes; that experience, understanding and skilled judgements are generally required in deciding on the optimum route, in a particular set of circumstances.

It is hoped that this book can provide the logic and the lexicon of building procurement. But skilled use of a lexicon may not always be sufficient – a general warning on the consequences of taking action without professional advice usually goes without saying but a particular warning on obtaining the right procurement advice at the right time from the right, impartial sources is emphasised.

This book aims to explain, simply, how the construction constituents of client, consultants and contractors fit together and to provide practical guidance on the decisions necessary to choose a particular procurement route. It introduces, as a common thread throughout the book, procurement assessment criteria (PAC) and procurement arrangement options (PAO) and looks at contracts appropriate to each procurement method. If property students, construction students, property, construction and professional practitioners and their clients find this book an advance on the hitherto scattered information on the subject its purpose will have been achieved.

In whatever way buildings are procured they remain generally with us for a relatively long time. Some people, arguably not enough, notice buildings, especially new buildings. The built environment has lately received much criticism both from commoners and from certain royalty – building and architecture are not likely to leave the stage of notice for some time to come.

I am aware that a book on building procurement, by dissecting the design and production process into 'pieces that fit together', may appear to suggest by the dissection that little art or artistry is present in building. Perhaps some of the artists, the architects and the host of talented designers who throughout much of building procurement remain vital to its visual success or failure may feel this. Designers, most important though they are, should appreciate that the procurement process of necessity embraces them, not vice versa, and it is useful for them to see how their contribution fits into the jigsaw. In an age that has seen quite some diminution in the management and leader role of designers, together with the emergence of project managers, project coordinators,

client advisers and the like, it is understandable that people from many different backgrounds now want to be 'the client's representative', to be the principal person.

It will be interesting to see if building procurement continues to come further towards the centre front of the stage – if successfully done it is an art, and many new players are learning that art.

Preface to the Second Edition

Writing the first edition of a book is one thing, revising for a second edition is quite another; likewise with a preface.

On reading the preface to the first edition of this book it still stands very adequately as an introduction. It sets the context of writing about building procurement in 1990 and much of it is just as valid today. This preface aims to give the changed context of 1996 in which building procurement is now carried out.

In the six years since 1990 the construction industry has been affected by a number of major changes. First, the industry entered, around 1989/90, its most prolonged recession since the Second World War. Of course in 1990 this was not apparent and only in retrospect can the true severity, depth and length of the recession be seen. Recovery has still not fully occurred, at least to match the somewhat unreal levels that existed when I wrote the first edition in 1990. Output, measured by most of the usual statistics, shows supply continuing to exceed demand, at least relative to the boom of the 1980s which reached its peak in 1989. In true terms tender prices are barely higher now than they were in 1989. Of course costs have risen but the end price to a 'building procurer' has rarely been such good value for money as it is today.

The consequences of the recession for clients, consultants and contractors have been varied. Clients have enjoyed a most competitive market since 1990, with too many organisations offering to supply them with building products and services, often at less than cost. The consequences of recession for consultants and contractors have been drastic cost-cutting, reduction of staff numbers to match falling workloads, attempts at improved efficiency and so on. During all of this, failures, liquidations, voluntary administration arrangements, enforced mergers, takeovers and other measures have been the norm for many an organisation. It is estimated that around 400 000 people have left the industry since the peak of 1990 with an estimate, as I write this, that perhaps another 30 000 may go in the next twelve months. Polarisation of companies and partnerships into large or small units is now taking place. Growth by acquisition is common and many old names, particularly among consultancies, have disappeared into general companies that offer practically any service, not only in the construction industry.

Change in government attitudes has led to more and more privatisation, 'opted-out' schools, health trusts and therefore more and more

potential procurement organisations, decentralisation of services leading to more 'amateurs' becoming responsible for procuring buildings. The central client role of government is less present today but government is more interested in competition, compulsory competitive tendering, value for money and in measuring performance by 'benchmarking'.

Global markets and international companies seem to have become more intrusive in the UK market. Foreign ownership and participation in UK construction companies and consultancies is now gaining pace, invariably bringing a change of attitudes and practices. 'Partnering' by clients with consultants and contractors is fashionable. The government has retained its very tight grip on public expenditure and has introduced the 'Private Finance Initiative' in an attempt to have private organisations provide public facilities for the government to lease or, sometimes, buy.

Professional institutions and trade associations in the industry have faced a relative drop in their membership and therefore in their incomes and are increasingly reluctant and/or unable to support other expenditure on industry initiatives, in addition to their membership of more 'pan-industry' bodies, such as the Construction Industry Council, the Construction Industry Employers Confederation and the Constructors Liaison Group.

In the middle of the recession a major review of the construction industry has been carried out by Sir Michael Latham, resulting in the publication of two reports, an interim report, *Trust and Money* in 1993 and the final report, *Constructing the Team* in 1994. These reports were generally well-received by the industry and caused, among other things, a series of 'working groups' to be established to develop such subjects as client briefing and codes of practice for clients of the construction industry. Other subjects examined or still in process are quality/price mechanisms for selection of consultants, standard qualification documents for public sector work, training, the image of the industry, equal opportunities, education of construction professionals, liability and latent defects insurance, partnering and a 30 per cent reduction in real construction costs. This last point, apparently asked for by major clients of the industry, is to be achieved by the year 2000. At the time of finalising the second edition of this book, in mid-1996, it is fair to say that much has been promised by setting up the 'working groups' and some of the reports now being published make interesting reading. It remains to be seen how much can actually be delivered by the industry at large following such a focus of attention on its practices.

It is crucial to realise that the client has become more and more important, quite understandably, since the late 1980s in the process of building procurement. Now no self-respecting construction body can speak without having visibly taken counsel with a client body. The

Construction Clients' Forum (CCF), the Business Round Table and the Construction Round Table (CRT) have been formed, the latter 'committed to making significant improvements in the performance of the industry'. The CRT is a small group of leading customers of construction from different market sectors. Collectively it invests over £3 billion a year in construction (government and its agencies probably invests around £5 billion annually). Whilst this is laudable, and the aim of these bodies is to bring the best of 'good practice' obtained by them from the industry to more and more occasional clients, building procurement remains for far too many an unsure, uncertain hazard.

The Construction Industry Board (CIB) has been set up following Latham and the industry now has the most structured, formalised machinery ever, with, it is claimed, much better access to the government. All this has come about following complaints of the industry (clients, contractors, subcontractors, consultants, suppliers – not apparently directly trade unions) and particularly some of the industry's foremost, therefore big, clients.

So it is hoped that something more cogent, long-lasting and fundamental will come out of Latham than has generally been discernible following former major industry reports, such as *Action on Banwell*, 1967, *Banwell*, 1964, *Emmerson*, 1962, *Phillips*, 1950, and *Simon*, 1944.

Another part of the findings of Latham was that the industry was too confrontational and that procedures, contracts and dispute resolution methods such as adjudication, aimed at reducing conflict and dealing with disputes more quickly, should be introduced. The right to adjudication has been made statutory and it remains to be seen if the industry finds this leads to less litigation or arbitration. Fairer construction contracts have been proposed by Latham and the CRT has announced a number of major clients and construction companies that have committed themselves to observing the twelve principles of fair construction contracts, as seen by CRT. The Chartered Institute of Purchasing and Supply (CIPS) keeps a register for inspection of organisations committed to fair construction contracts.

In the area of building procurement the role of a 'principal adviser' is needed more and more to give independent advice at crucial times to clients, particularly before any early decisions and appointments of consultants and contractors are made. The advice of a principal adviser is particularly of value, and is usually crucial, to those who have never procured a building before. It is hoped that education, training and promotion throughout the industry will make the role of 'principal adviser' more widely understood by clients and by the industry.

ALAN TURNER

Acknowledgements

Thanks are due to the Business Round Table for permission to reproduce pages 6 and 7 from their publication *Thinking about Building*, published by the Business Round Table in 1995. This publication, updated by the Construction Round Table following the advice published in the National Economic Development Office (NEDO) publication of 1985, remains the clearest layman's guide for anyone thinking of building procurement. In particular I thank Eur.Ing. Henri Pageot, BSc, CEng, FICE, the Executive Director of the Construction Round Table (CRT), for ideas on a number of construction industry issues exchanged during discussions in his office and for access to a number of CRT reports published during 1995 and 1996.

My direct knowledge of construction management, unlike management contracting, has so far been limited and therefore I sought the view of two organisations that would be representative of experienced clients and of experienced contractors. First I thank Neil Smith, of Laing Group Contractual Services, for his help, and particularly Alan Page of Laing Management Limited, for a very full explanation of construction management (and management contracting) as provided by John Laing and for reference to the University of Reading report, published in 1991, after the construction management forum. Second, I record my thanks to Christopher Strickland, development director, and Julian Vickery of Greycoat plc for discussions on their approach to construction management.

Since the first edition I have learnt some of the mysteries of word-processing and have carried out production of most of the new text myself. In those cases where I have not, I thank my previous secretary, Rena Monks, for again being on hand to help out. Thanks are due to my daughter Siân for assistance in preparation of the illustrations and diagrams in the book. I also thank Professor Roy Morledge of The Nottingham Trent University for a sight of a number of drafts of *The Procurement Guide* to be published by the Royal Institution of Chartered Surveyors in 1996. Last I thank my brother, Dennis Turner, BA(Hons), FRICS, MCIOB, ACI Arb, who has written several books on building contracts and building contract disputes, for ideas that we have exchanged during a number of discussions on this and other books.

Since 1994 I have been in practice on my own account as an arbitrator and quantity surveyor, principally giving advice on procurement and contract disputes. I thank the clients I have had in these areas for

xviii *Acknowledgements*

confirming two views. First, that with the best procedures and contracts but with the wrong attitudes in a team conflicts may still arise. Second, that poor briefing, poor documentation and poor administration can invariably be overcome and a project made to work, albeit with stresses and extra costs, if attitudes of goodwill exist on all sides. But even with goodwill the worst parts of the construction industry, its clients, consultants and contractors, remain a wretched advertisement for mismanagement and are therefore too often the public image of 'building'.

ALAN TURNER