

2. The advantages of complying readily with the Act at initial design stage rather than possibly amend as a result of pressure and planning stage.
3. The wider range of candidates for employment (some disabled people have considerable skills and abilities).
4. The possibility of Manpower Services Commission grant of up to £5,000 for making offices suitable for disabled workers.
5. The savings in staff time resulting from the installation of a lift where one would not have previously been planned.
6. The imponderable items such as increased prestige, staff morale etc. resulting from the provision of a lift.

In conclusion, it is clear that the provision of basic access facilities does increase the capital cost of a new building. This increase is however very small and the provision of facilities brings with it several benefits.

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## 1982 BUILDING INDUSTRY CONVENTION

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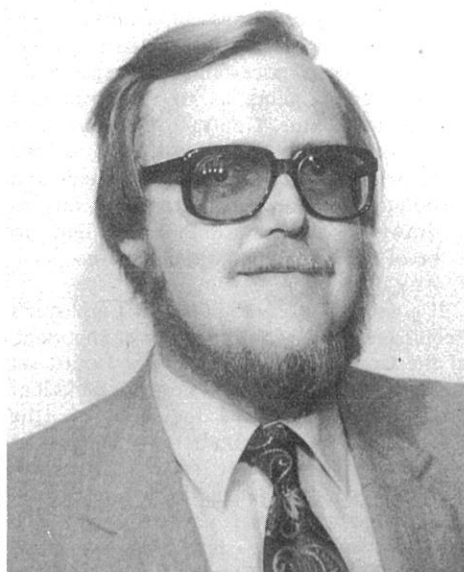
#### Speakers:

J. H. M. Sims, FRICS, FIQS  
G. G. Trickey, FRICS, FIQS

Joint seminar staged by the IQS and RICS.  
Full details on page 38.

# New JCT Design/Build Contract – 1981

Harold S Crowter, ARICS, AIQS, ACI Arb



Harold Crowter trained as a quantity surveyor in local government, including two years in timber framed housing development, and qualified before leaving local government. He spent seven years with an East Midlands Contractor, initially as Senior Quantity Surveyor and finally as Contracts Director. This was followed by a period in Project Management of Design and Build work for an International Contractor. In 1979 he started his own private practice specialising in claims consultancy work. The Practice is now established, doing approximately 90% Claims Consultancy and associated dispute work and 10% Project Management/Co-ordination of Design and Build Work.

Harold is an IQS Council Member representing the East Area since 1981. He was Chairman of the IQS Trent Valley Branch from 1979 until 1981 and is a member of Trent Polytechnic Surveying Liaison Committee.

This long awaited contract entitled "Standard Form of Building Contract with Contractor's Design 1981 Edition" was finally published in November 1981, just in time for "Interbuild". The form is published as part of a package of six documents costing a total of £13.70, plus VAT.

The documents are:

1. The Form of Contract (referred to above) to be known as CD81 (a nice touch in the year of the Royal Wedding!).
2. Formula Rules dated 1st September 1980.
3. Practice Note CD/1A.
4. Practice Note CD/1B.
5. "Contractor's Designed Portion Supplement (1981)" for use with SF80 with Quantities (apparently now to be known as "SFWQ").
6. Practice Note CD/2.

The first four documents are relevant to a situation where the Contractor carries out all of the design, and the last two only to that comparatively rare occurrence where the Contractor designs only a portion of the

Works, the remainder being designed by the Employer's Architect or Supervising Officer.

My first task is to outline the history of standard forms of contract for design and build work. The only standard form available has been the NFBTE form, which has not gained any measure of acceptance with Employers or Contractors. From my experience, the most common forms of contracts have been either a revised version of JCT 63, usually produced by a quantity surveyor on behalf of the Employer; or alternatively a printed form of contract produced by Contractors who specialise in Design and Build work. The obvious problems of one side thinking that the other's form of contract is biased have arisen, and Employers without the necessary expertise to produce a form of contract for themselves have been confused by the proliferation of different forms put forward by their tendering contractors.

There was therefore an obvious need for all sides of industry to get together and produce a Standard Form acceptable to all, and to take account of recent Acts of Parliament and case law.

Production of this new form has been thorough with all sides of industry, including individual contractors specialising in design-build, being asked to comment on the proposals. I myself had an opportunity to look at the proposals in 1979 on behalf of one such contractor, and it is gratifying to see that the amendments we proposed have been incorporated into the new form.

There has, of course, been considerable opposition from the architects, who with some justification have seen their traditional role all but destroyed in this new form. My personal view is that to some extent they have themselves to blame as do the quantity surveyors. The increasing popularity of design and build as a concept has been the failure of the architects and quantity surveyors to adapt the traditional method of procuring buildings to the needs of the Client. If a client goes to an architect and says—I want a factory built and I want to have it in use 9 months time, the traditional system would only in exceptional circumstances be able to produce the goods. Design-build might well succeed, as the Contractor could be on site in two to three weeks—quite impossible under the traditional system. I will accept that the traditional system might well produce a cheaper tender, but time is money, and most industrialists take the view that it is better to spend slightly more money now and obtain production facilities earlier rather than wait several weeks or even months for a keener price. The economics are obvious. The Contractors have adapted to the situation, while the professions have not to the same extent. I could go on about this for hours, but I digress.

The new form was due to be published in

March 1980, and was included in the January 1980 price list of RIBA Publications Ltd. I am not privy to the reasons for the 18 months delay, but the important question is, has it all been worth it?

Any study of CD81 must be preceded by a thorough reading of the two practice notes CD/1A and CD/1B. CD/1A is a general description of the new form and the contract documents, while CD/1B is a more detailed analysis of the clauses.

Before going into more detail of the provisions of CD81 it may be helpful to note the matters omitted or excluded from the new form.

As stated above there is no provision for an architect, quantity surveyor or anyone else to act in a quasi-arbitrary capacity between the parties. Any professionals appointed by either employer or contractor act as if they were employer or contractor, and no statement of a professional adviser can be binding on the other party without their consent.

Also gone is the Clerk of Works, and yes wait for it, Nominated Subcontractors and Suppliers. Congratulations to JCT for taking this last step, they have ensured in one move that the level of disputes on this form will be proportionately less than on the rest of the JCT 80 series. I heard a leading barrister in the construction field say recently that he derived 50% of his income from disputes involving nominated subcontractors—a fact that speaks for itself.

As a consequence of the above omissions, the functions and duties of the persons omitted are also absent, eg. Architects' Certificates, Variation Orders (as such), etc.

It can therefore be seen that the fundamental elements of a contract under CD81 will be entirely different from the documents used in a traditional contract.

The first new document to be considered is the "Employer's Requirements". This takes the place of Bills of Quantities or Specification and Drawings. This is not a new concept to Design and Build—it has previously been known as the Employer's Brief. There are certain essentials of the Employer's Requirements which I will list below:

1. It must contain sufficient information for the Contractor to formulate firm and acceptable proposals.
2. Planning permission and other statutory requirements; whether planning permission obtained by the Employer, either in outline or detail. Any limitations or conditions imposed by planning permission. Whether the Contractor is required to obtain planning permission or clear reserved matters from previous outline permission. Any time requirements as to planning permission.
3. A full description of the required accommodation, kind and number of buildings, schematic layout, specific requirements as to materials, services and forms of construction.
4. Any constraints including planning permission, restrictive covenants or easements.
5. Site requirements, information about conditions, whether the Contractor is required to carry out his own soil survey, or use that provided by the Employer. Alternatively, statement of

assumptions on which the Contractor is instructed to prepare his substructure and groundworks design. Presence or absence of mineral workings. Previous usage of site and known or anticipated ground pollution. Definition of site boundaries. Availability of public utility services. Limitations on access and storage space.

6. Information, drawings, etc. required to be produced by the Contractor with his proposals.
7. Data for Conditions of Contract, eg. possession and completion dates, liquidated and ascertained damages, etc.
8. Any requirements as to the form and content of the Contractor's Proposals. Traditionally the Proposals are in the form of a professionally printed and bound brochure together with various drawings. Presentation is thought to be of some considerable importance.
9. Any other requirements.

It goes without saying that the Employer's Requirements are probably the most important of the Contract Documents. They must set down in writing usually without the benefit of prior discussions with the designer (the Contractor), all the matters which would normally take weeks of discussion between the Employer and the Architect to resolve. It is my experience that few employers and perhaps surprisingly few architects and quantity surveyors know how to prepare an adequate brief. I have found that this failure does more to give design-build a bad name than anything else. Many contractors who are specialists have project managers or even marketing executives who are expert in obtaining a proper brief from the Employer, often by the use of a comprehensive tick list. This is fine when one contractor is negotiating, but of little use where there is little or no direct contact between the Employer and the Contractor during the pre-tender stage.

This is one area where the Quantity Surveyor, who usually understands the Contractor's point of view much better than the Architect, can extend his sphere of influence. I consider that there is a significant role for the QS to play as a project manager or project co-ordinator in design and build contracts. There is no reason why the art of producing an adequate Employer's Brief should not be as commonplace as the art of producing Bills of Quantities.

There is only one object of the Employer's Requirements and that is to produce the "Contractor's Proposals". To be adequate this document must also have certain essential characteristics:

1. The Proposals must respond to the content of the Requirements. If the Requirements ask for a 5000m<sup>2</sup> industrial unit, it is pointless proposing a unit of 4000m<sup>2</sup>.
2. Any data for the Conditions of Contract not stipulated by the Employer must be stipulated by the Contractor.
3. If the proposals seek to amend or amplify the Requirements this must be stated clearly, so that the Employer's decision can be obtained and if he agrees with the Contractor's amendment, the Requirements can be amended before the Contract is signed.
4. The Proposals should not contain P.C.

or Provisional Sums, other than any Provisional Sums included in the Requirements.

5. The following relevant documents:
  - (a) Drawings, plans, elevations, sections, etc.
  - (b) Information about the structural design.
  - (c) Site layout drawings showing services.
  - (d) Specifications for materials and workmanship.
6. The most essential requirement is that the Requirements and the Proposals do not conflict. The Contract Conditions assume that the two documents are in accord, and there is no procedure laid down for dealing with discrepancies. Either document can, of course, be amended before the Contract is drawn up to ensure complete compatibility. This point cannot be over emphasised.

We have seen therefore that the Contract Documents will contain the Employer's Requirements and the Contractor's Proposals. The next item listed as a Contract Document is the "Contract Sum Analysis". CD81 is a lump sum contract with the price payable in stages either by regular valuation or alternatively by agreed stage payments. If the latter method of interim payments is selected then the lump sum contract sum will have to be broken down into stages, this is done in the Contract Sum Analysis, which is submitted with the Contractor's Proposals, or as laid down by the Requirements.

There are further purposes, however, for the Analysis. It is intended that the Employer will be able to order variations or "changes" in certain circumstances, (of which more later), and therefore the Contractor and Employer must have some agreed basis on which the "change" will be valued. The Contract Sum Analysis here replaces the Bills of Quantities and the Schedule of Rates in facilitating that operation.

A third and further reason for the analysis is when fluctuations are calculated by formula adjustment. The Contract Sum has to be sufficiently analysed to enable this operation to be carried out. I will return to the application of the Formula later.

So therefore we have the four constituents of the Contract Documents:

1. Employer's Requirements.
2. Contractor's Proposals.
3. Contract Sum Analysis.
4. Articles, Conditions and Appendices. (CD81).

Before moving on to consider the Articles and Conditions in more detail, it is sensible to pause and consider 3 points that are raised by this new contract. They are: i. professional advisers; ii. design liability; iii. VAT.

## i. Professional Advisers

It is common, indeed desirable, for both the Employer and Contractor to use professional advisers whether in-house or independent professional firms. As mentioned above the Employer will probably use a professional adviser to formulate his Requirements. It is desirable also for the Employer to seek advice on the suitability and selection of tenderers, the appraisal of the tender and the Proposals to enable the Employer to make an informed choice. Post-contract the Employer will need advice on the performance of the Contractor



in his execution of the Works and payment therefore.

Neither the Contract Conditions nor the Practice Notes make the employment of professional advisers compulsory, nor does the Practice Note offer advice on circumstances when professional advice should or should not be sought.

Likewise the Contractor will also often entrust some of his responsibilities to professional advisers.

Usually this will mean employing an architect to prepare the design, often supplemented by a Structural Engineer, one or more Services Engineers, and perhaps a Quantity Surveyor. For the Contractor will usually build up his price by the use of Bills of Quantities, albeit builder's quantities—another source of work here for the resourceful QS.

The larger contractors carry out all or most of this work in-house under the guidance of their own project manager or project coordinator.

The new form of contract does in fact specifically provide for the Employer to have an "Agent" to act on his behalf: this "Agent" is named in Article 3.

The most important thing to remember is that whatever professional help either party may engage, the parties themselves remain wholly responsible and liable for the acts and omissions of their advisors. The Contractor cannot escape liability for faulty design just

because he engaged an architect to prepare it for him. The Principal must therefore take great care to pass on his liability to his Agent.

A professional who is acting for one party will be precluded from acting for the other. For example, an architect preparing the design for the Contractor acts as if he were the Contractor. Any general advice he gives to the Employer will be given on behalf of the Contractor. He is not independent in any way. Which leads on to the second point.

## ii. Design Liability

In one sentence the aim of the Conditions is to impose the same liabilities for design onto the Contractor as would normally be accepted by an architect acting directly for his client. This liability is of course in addition to the liability for materials and workmanship. The Contractor will normally cover his liability for design by taking on a Professional Indemnity Insurance Policy. The Contract Conditions do not oblige the Contractor to take out insurance cover, but the Employer may do so in his Requirements. The main point to watch here is that the Employer's Insurance Requirements match up to cover that can be purchased on the insurance market. It is essential for both parties to take expert advice on these matters.

If the Contract involves the Contractor providing dwellings to the Employer, design liability is also imposed by Statute, namely the Defective Premises Act 1972. The

Contractor's obligations here will be satisfied if the dwellings are registered with the National House-Building Council under their 10 year protection scheme. The Act also imposes a liability for consequential damages: the Contractor's liability is limited to an amount stated by the Employer and inserted in the Appendix.

## iii. VAT

In a traditional building contract, design fees are positively rated, currently at 15% irrespective of the type of work, but construction costs are zero-rated for new work and certain works of alteration. Under CD81 both operations are combined, although the design element may well be shown separately on the Contract Sum Analysis. Does the design element still attract VAT at standard rate? The answer is no.

Providing the work is zero-rated (eg. new work) the design element of the Contract Sum under CD81 is also zero-rated. Broadly the principle is this—"The liability to VAT of the design element will follow the VAT liability of the main works".

In a mixed-work package the design element will have to be apportioned to positively-rated and zero-rated work in an appropriate manner.

That leaves us with the Articles and Conditions to examine in detail. That I hope to do in next month's issue.

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