

Preliminaries in Bills of Quantities for Building Works

By N. O. M. Azu, MSc, DipQS (Nottm), (Associate)

There are some members of the construction industry who see very little purpose in investigating the subject of Preliminaries (Prelims), however, it became apparent during a recent study by the author that there was, in fact, considerable scope for research into the subject if only because of the divergent views held by many members of the design and construction team.

This article is based partly on the analysis of replies received from two sets of questionnaires on Prelims sent out to members of the construction team in an effort to reconcile theory and practice, and partly on the results and conclusions taken from the overall study.

The questionnaires were designed to find out what the members of the construction team, including all the expertise involved in preparing and using Prelims either directly or indirectly, thought about the subject and, where prudent, to compare these thoughts with existing theoretical concepts. Finally, ways of postulating the optimum use of the general concept of Prelims was investigated.

From interviewing many people concerned with the subject from all sides of the contractual fence, i.e. people who want to maintain the *status quo*, people who want to see Prelims left out of the Bills of Quantities (BoQ) and people who advocate minimal change, it became apparent that a small sample would be adequate for the study, however, the results obtained, like all statistics, are subject to normal sampling bias.

Two sets of questionnaires were sent out:

1. to construction firms, and
2. to independent professionals, e.g. quantity surveyors and architects in private practice, education, government departments and research establishments.

The construction firms were chosen at random but from the Midlands area, although because some of the larger firms operate their Estimating Departments on a national basis, it is reasonable to suggest that the results may reflect a national pattern.

Questionnaire (2) was sent to people in all parts of England and Wales, whom it was thought had strongly held views.

The contents of Questionnaire (1) covered:

- Preliminary particulars
- Format and layout of the Prelims bill
- Contract
- Pricing
- Importance
- Uses
- Observations
- Generally
- Research

The contents of Questionnaire (2) covered:

- History of Prelims bill
- Preparation of Prelims bill
- Format and layout of Prelims bill
- Contract
- Uses
- Research
- Generally

Size of Firm v Present Format of Prelims Bill		Satisfactory	Unsatisfactory	Needs a change
Annual Turnover up to £				
100 000		*	*	*
250 000		*	*	*
500 000		-	-	-
750 000		-	-	-
1 000 000		-	-	-
Over	1 000 000	58	17	25

Figure 1. E.g. 25% of firms with Annual Turnover exceeding £1m think that the present format needs a change.

The analysis of both questionnaires showed that:

73% of construction firms think that not too many items are covered in the Prelims bill and the same percentage use Prelims clauses in detail. This is surprising as the majority of the other members of the construction team, not intimately involved, hold a contrary opinion.

87% think Prelims should be an integral part of the BoQ. It appears that contractors are generally not impressed with the "get-out" clauses sometimes included on behalf of the employer by his agents.

60% want the contract clauses listed. It is not clear why they want these since they are not usually priced, perhaps to serve as a reminder of their importance in a general sense.

The result from the answers on the philosophy of pricing is interesting for it is not generally known what lies behind this. Only 7% price based on intelligent guesswork, a higher result was expected. This result is clearly counter to the views expressed by the Institute of Building (IOB) East Midlands Region Estimating Section in 1971 where it vigorously recommended the incorporation of sufficient items from the Code of

Difficulty in Pricing v Philosophy of Pricing	1 First Principles	2 Historical Data	3 Intelligent Guesswork	4 Combination of 1 & 2	5 Combination of 1, 2 & 3
1 Insufficient information	-	-	-	50	50
2 Difficult to price	-	-	50	-	50
3 A combination of 1 & 2	-	-	-	-	*
4 Better priced elsewhere	-	-	-	-	*

Figure II. E.g. 50% of firms that have difficulties in pricing because of insufficient information price from a combination of 1 and 2 (First Principles and Historical Data).

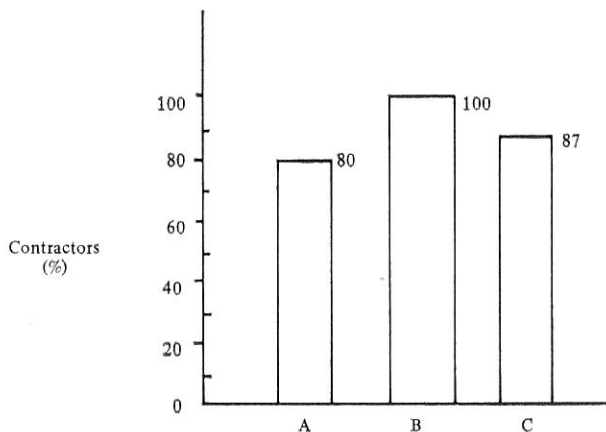


Figure III. Observed relationships between value of Prelims and A - Contract Period, B - Size of Project, C - Type of Project.

Adequacy v Present Format	Satisfactory	Unsatisfactory	Needs a change
Cannot be adequately covered elsewhere	75	0	25
Can be adequately covered in the Preambles and measured work	*	*	*

Figure IV. E.g. 75% who say that Prelims cannot be adequately covered think that the present format is satisfactory.

Practice into the Prelims to offset the degree of guesswork in pricing Prelims.

Estimating surely involves foretelling situations about which little is known, more so with Prelims. There is some evidence to show that estimators try to evade the real problems of their trade by presenting socially acceptable forecasts.

73% actively collect data from sites and head office for future use in pricing Prelims whilst only 13% price from first principles and historical data and 7% from historical data only. There appears to be some inconsistency here.

67% agree that site management is the most expensive Prelims item. There may well be some correlation between this figure and Fine's assertion that if you discard cover prices, the difference in price between the highest and lowest bidder is about equal to the mean estimate of the labour content of the job or, to put it another way, if you discard cover prices, the difference in tenders is caused by the costing of labour by the different firms.

93% think that pricing Prelims in detail is a help. This is very surprising indeed because to put it mildly, very few contractors price their Prelims bill in detail.

It is surprising that 87% think that Prelims could not be adequately covered elsewhere in the BoQ. Perhaps this result reflects the construction industry's reluctance to change established practice, however inadequate it might appear to be.

Research v Prospects for BoQ	Good Prospects	Some Prospects	No Prospects
Positive Suggestions	67	11	22
Negative Suggestions	80	20	0

Figure V. E.g. 67% of these who made positive suggestions think that there are good prospects for the BoQ in general.

Distinctively split v Present format	Satisfactory	Unsatisfactory	Needs a change
To split into priceable and non-priceable items	25	*	*
Not split into priceable and non-priceable items	*	*	11

Figure VI. E.g. 25% who want Prelims split into priceable and non-priceable items think the present format is satisfactory.

100% think that the size of the project has some relationship with the value of Prelims as shown in Figure 3. If size is synonymous with tender figure, then this is not borne out by the facts since the analysis of tenders of various sized projects showed no identifiable trend.

The results of the questionnaires appeared to show that both the design and production teams want to retain Prelims as an integral part of the BoQ, i.e. 94% of the former and 87% of the latter.

The construction firms (73%) and professionals (63%) see good prospects for the continuation of BoQ prepared by the independent quantity surveyor (QS). This confirms the observation that the industry is not ready for any radical change as far as the documentation of building contracts is concerned.

54% of the construction firms want Prelims clauses split into priceable and non-priceable items, whilst only 25% of the professional groups see this as an advantage.

The fact that only 25% of professionals and 27% of construction firms think Prelims play some role in facilitating claims is not particularly surprising since Fine observed that only 0.1% of contractors' incomes come from claims whilst 6% emerges through extra items.

General Conclusions

Several eminent quantity surveyors have queried the role of Prelims in the construction industry as a whole, but due to the conservative nature of the industry, little, if any, action has been taken to bring in a radical change.

The building industry is not ready for the total abandonment of Prelims but some change is required to bring it in line with the current thoughts of both people who prepare and use the section in practice. This need is emphasised by the lack of consistency in the preparation and use of Prelims.

Contrary to the majority opinion expressed in the questionnaires, the author believes that some of the Prelims clauses can be adequately covered elsewhere in the Preambles or measured work in the BoQ.

The Preambles should precede the relevant work section. According to the Working Party on BoQ by the Junior Organisation of Quantity Surveyors (JOQS) Research Programme in 1968 80-85% preferred the Preambles to precede the trades or work section in the BoQ and that the bill item be fully described in preference to full Preambles.

The fact that 73% of the construction firms think that not too many items are covered in the Prelims Bill in a way confirms the findings in the Banwell Report of 1964 on the simplification of the BoQ where builders regarded BoQ as essential and did not wish to see in the existing conditions any diminution in their size or the range of information they contained.

The view is, however, often expressed that the contracts manager rarely reads in detail the mass of information sometimes contained in or implied by the Preliminary Clauses to Bills of Quantities.

Anything that can be done to minimise the amount of data the contractor has to assimilate, providing all relevant information to the project is given, is a step in the right direction. More practical information regarding the project, sometimes included in the Prelims should be given on the drawing which is, perhaps, a more practical document.

There is some evidence to show that in spite of the complexity of construction projects Sweden, for instance, has managed to rationalise the amount of contract documentation due to the growth of mutual trust between professional members of the construction team.

The principle of "item coverages" adopted by the Department of the Environment is recommended for cutting out large amounts of repetitive material in the BoQ and with particular regard to Prelims where it is imperative to state particular items. A standard booklet, or code of procedure, could be devised and could be deemed to be in the possession of every tenderer and this would list the items to be included in the rate. This would enhance the concept of standard descriptions generally making the life of estimators easier and also cutting down arguments at the Final Account stage. It could be argued, of course, that this will place greater specific responsibility on the QS.

There is no doubt that the overwhelming majority of the items in the Prelims are not priceable as such, therefore some practitioners advocate cutting down the amount of this type of information. On the notion of stating only priceable items, there is a problem regarding who should determine what is priceable, since contractors in general are not consistent in their pricing methods.

The minimisation of what costs are included in the Prelims, thus putting the costs in the appropriate sections of the BoQ, would make the BoQ rates more realistic for the purpose of valuing variations in accordance with Clause 11 (4) (a) of the JCT Form. The practice of some contractors of including the whole of the profit under clauses such as Contractors' Obligations or the like undermines this assumption.

Contractors are under great pressure when estimating Prelims with any degree of accuracy, therefore information which would help to facilitate pricing should be given. There is a tendency however to note superfluous information with the attendant danger of overlooking important information. The idea of a checklist would be a help in solving this type of problem.

In situations where a lump sum value is submitted to cover the whole of Prelims which is generally quite unsatisfactory, it should be made obligatory for contractors, when submitting their priced BoQ, to break down the value of Prelims into:

- fixed and variable costs
- detail pricing of the constituents of site management costs



'Have you no idea how many estimating pads we should order?'

- detail pricing and list of plant where not included in the other rates elsewhere in the BoQ, together with particular utilisation periods
- detail pricing of any other major factors which the contractor considers to be crucial in arriving at his tender for the project, e.g. projected cashflows, etc.

These would enhance the use of Prelims for interim valuations, variations and cost studies generally.

While the Prelims are an integral part of the BoQ, which is a contract document, it should be noted that the provisions in the Prelims are only binding insofar as they relate to "the quality and quantity of work". The extra conditions which some architects and quantity surveyors are in the habit of including in the Prelims to cover any eventuality have no contractual effect unless physically incorporated in the JCT Form.

The actual Form should be incorporated in the BoQ thus eliminating the need for listing the clause headings of the JCT Form. Clauses not required should be physically deleted on the Form and preferably initialled by the parties. Consequently the real danger of discrepancy between the JCT Form and the Prelims will be eliminated.

In the absence of cash columns where the contractor wishes to price a contract clause, he should extract the clauses giving details of his pricing when required by the employer.

Quantity surveyors should desist from disclaimer or get-out clauses such as "do not order from the Bills", as this is often regarded as acting in an unprofessional manner.

The details in the Prelims should contribute in no small measure towards the total cost of the project, therefore it is prudent that great care should be taken in its drafting, notwithstanding the format.

Bibliography

1. N. O. M. Azu, Aspects of Preliminaries in Bills of Quantities for Building Works. MSc Thesis The University of Aston in Birmingham, October 1976.
2. B. Fine. The Builders Conference, 15th February, 1968.
3. IOB. Code of Estimating Practice, Third Edition IOB 1973.
4. J. Hall. IOB East Midlands Region Estimating Section 1971.

Acknowledgements

This paper has been extracted from a Higher Degree Thesis carried out by the author in the Department of Construction and Environmental Health under the supervision of Mr. A. H. Wootton, BSc (Associate), Post-graduate Tutor in Construction Management and Economics.

Correspondence

A Tale of Woe

Sir,

I am following with interest the continuing saga of the Senior, Lesser Partnership and, with humblest apologies to Mr. Miller, put forward the following possible anomalies in the contract, in like style.

Jim

Have you seen these items in Green's claim?

Sam

Oh no! Not more worries from that man. OK, what has he done now?

Jim

Firstly, he claims that we have no right to make deductions from his fluctuations for those items we discovered on invoices which were lower than his basic list.

Sam

And why not? - clause 31A talks about decreases as well as increases!

Jim

Ah, but . . . he is quoting 31D(2), he didn't give notice of any of the decreases which is a condition precedent to payment.

Sam

Oh God. Why do these people have to read the contracts rather than leave things to us. Was there more?

Jim

One more point. He claims interest for breach of clause 30.

Sam

How come? Surely our valuations included for the total of work executed, etc.

Jim

No. He doesn't dispute that the calculation of the valuation was fair but points out that the "total value" must be inclusive of fluctuations and . . .

Sam

But he didn't even submit fluctuation claims until after practical completion. What's he got to complain about, we included the value as soon as possible.

Jim

He quotes 30(5) (b) - he doesn't have to provide necessary documents prior to payment of interim certificates and he goes on to state that, as invoices would not have been available for recently delivered materials, we should have used the notified increases to calculate the total amount due in interim certificates.

Sam

Think I'll go off for a round of golf - this account is going to give me a nervous breakdown before long.

Exit Jim.

Yours faithfully,

P. D. Horne

Maidstone, Kent