


WEDC
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Effective contracts for appropriate technology

INTRODUCTION

1. This Paper seeks some reasons why too many projects founder on contractual rocks. Engineering is essentially a practical profession, yet, too often it becomes a sideshow for the legal profession to demonstrate their wares. Why?

CONCEPTUAL THOUGHTS
Contractor's view

2. It is a useful starting point to examine what might be the principal conceptual thoughts between the two main parties to any project. Looking first at the situation from the contractor's point of view - he's the one doing the work, he might want to know:

- i) how is he going to get paid,
- ii) what does the job involve doing,
- iii) who is going to keep an eye on him, and
- iv) what powers is that fellow going to have,
- v) what does he do if things go wrong,
- vi) what 'get-out' clauses are there?

Client's view

3. From the client's point of view - he's the one footing the bill, his list might look like this:

- a) what powers does he have over the contractor,
- b) how closely has he got to watch matters,
- c) who is responsible if things go wrong,
- d) how does he control his payments,
- e) what guarantees does he have that the finished job will be what he wanted,
- f) what 'loop-holes' are there?

4. These lists have, provocatively, been set out in what could be their relative order of importance! Of course, most people will have recognised that these lists are incorporated into our standard Conditions of Contract. So, of course, is much else as well. It is my task in these few words to persuade you to a view I have now held for some time that really we have made our contracts far too cumbersome and long winded.

FUNDAMENTAL QUESTIONS

5. It is time that two very fundamental questions were re-examined and answered.

- 1) What exactly are we trying to get across in the formal statements of our contracts?
- 2) Is the way in which it is being expressed the best and clearest for that particular point?

6. In the context of what I now have to say it must be remembered that we are here to discuss the implementation of the Water Decade. Translated down to practical levels that will mean a very much greater number of small projects than larger capital works. However, whilst my comments are obviously directed at the smaller projects it is also worth asking oneself if there might be lessons to be learnt for larger projects as well.

TYPICAL PROBLEMS

7. Before I turn to the questions I posed I shall first put before you two of the more common areas of dispute. These are merely intended to be taken as examples, but they indicate the types of problems which underlie these two questions.

Payments

8. The first of these disputant areas concerns payments. Clause 60 in both the FIDIC and ICE (Refs.1 and 2) documents dismiss it to Part II - that part composed by the Employer. Yet, contract payments are fundamental to the unhindered progress of a contract. Consider for a moment, even on a small project a contractor may have to carry up to three months financing before he receives his first payments. If that is delayed, and if it is a small project, then the contractor may even have finished before receiving his first progress payments.

Risk profession

9. In addition to being a practical profession it must be recognised that engineering is a risk profession. There can be very few engineering projects where any responsible engineer would pronounce them to be risk free. Yet, as an industry we tend to be dominated by administrators and auditors, to whom risk is anathema. But, regularity of cash flow is life-blood to the contractor who is doing the work, and if that regularity is to be maintained it sometimes involves risk on the employers part.

10. It must be understood though that the Employer will have to have some accountabil-

ity for money spent. But in setting out the Contract it should be possible for the Employer to allow for this and set down realistic time periods for the various stages from when a Contractor puts in his account to receiving his payment.

Import licences

11. The situation may be even more complicated if any question arises of import licences and foreign exchange. Specialist goods are often immediately unavailable in many developing countries. In such circumstances the employing authority should have greater cognizance and be better prepared to assist - especially when those authorities are often governmental or quasi-government organisations.

Re-think

12. There is a need to re-think and re-state the whole philosophy underlying contract payments.

Site supervision

13. The other disputant area concerns site supervision. There are two grey areas here. First, as a general observation, in most developing countries projects are carried out at great distances from the offices where they were designed. Telephone services may have to depend on radiocall, or on the operating hours of a manual exchange. Consequently, the site staff are left to get on with things far more than might be the case in a country such as England, for example.

Contractor's agent

14. So far as the contractor is concerned that is alright. Under the contract, and under his administrative set-up, his site representative is his agent. That is clearly and unambiguously understood by all parties.

Delegated duties

15. However, and here we have our first grey area, the employer is represented first by the Engineer, who may or may not be the same person who designed the project. Then, subordinate to the Engineer is the Engineer's Representative, more commonly called the Resident Engineer. Now, what is so often overlooked is that the R.E.'s powers are severely limited, unless the Engineer delegates other duties, in writing to the contractor. Even then there are some duties which even the Engineer cannot delegate - see, for example Cl.40 (FIDIC), Suspension of Work.

Assumed powers

16. Yet, there are many reported instances where R.E.'s have assumed responsibilities not delegated to them and the contractor has accepted that as status quo. The problems then arise of course when a contractor thinks he has a justifiable claim based on some

action or omission of the R.E.

The Engineer

17. The other grey area arises over the use of the word 'Engineer'. In Kenya, for example, it is a summary offence under the Engineer's Registration Act to use the title 'Engineer' unless one has the proper qualifications to go with it. However, it is the practice with some Ministries in Kenya for the 'Engineer' to be vested in the Permanent Secretary, who is not usually a qualified engineer. Difficulties have arisen from this when an Engineer's Decision is required.

Re-think

18. As the titles Engineer and Engineer's Representative seem to attract suspicion and misunderstanding there has to be a re-think on their titles and functions.

A solution

19. One solution might be to re-title these positions. For example, the Engineer could become the Senior Technical Officer, and the Engineer's Representative could be titled the Superintending Officer. These titles are, I submit, less ambiguous. Together with these new titles I also believe the respective duties should be re-written and that more autonomy could be given to the Superintending Officer.

THE AIMS OF CONTRACT CONDITIONS

20. Returning now to the first fundamental question any standard legal textbook will give you the legal definitions of Condition and Warranty. (Ref.3). A moment's reflection based on those will reveal that what we call Conditions of Contract in fact contain clauses which do not deserve to be distinguished as Conditions.

Simple statements

21. Again, I will presume on your abilities to determine from the textbooks what constitutes a valid contract. How then do, or rather should, the Conditions of Contract fit in. I believe that brought back to basics they should be simple statements of the contractual obligations of the parties towards each other.

Objections

22. At this statement I can hear lawyers leaping to their feet to shout: "Objection, we must have certainty". Quite right, we must, but at what cost? In any case if that is the lawyers' plea, why are there so many books explaining the terminology in the documents? (Refs.4 to 7). It is interesting to note that two prominent such gentlemen prominently disagree on a lot of issues!

Simplicity

23. Simplicity should not reduce certainty. It is a belief of mine that too often the printed word veils in obscurity a mysticism founded on ambiguity.

Something wrong

24. There must be something seriously wrong when the deputy managing director of a major international contracting firm is quoted as saying:

"... the conventional FIDIC form of contract can engender confrontation between the Engineer and the Contractor, even when the project is straightforward". (Ref.8).

Solution defined

25. I say again I believe the Conditions of Contract should be simple statements of the basic contractual obligations, which I believe should include:

- 1) Defining who the parties are, and their respective obligations.
- 2) How payment is made, by whom it is checked, and how long it will take.
- 3) What happens when things go wrong.
- 4) How to resolve disputes.

CLARITY OF PRESENTATIONFog Index

26. The second of my basic questions concerned clarity of presentation. May I introduce you to the 'Fog Index'.

Defined

27. The ICE publishes an excellent little booklet (Ref.9) in which the 'Fog Index' is defined thus:

- "The Fog Index was devised by Robert Gunning as a means of measuring the comprehensibility of written work. Test your essays to establish their rating in the following way.
- (a) Choose, at random, a number of consecutive sentences containing in total approximately 100 words.
 - (b) Note the number of sentences contained by the 100 words and calculate the average number of words per sentence (NWPS).
 - (c) Using the same 100 words, count the number of words which contain three or more syllables, ignoring proper nouns and words which are three syllables long because of -ed or -es (TSW).
 - (d) Add NWPS to TSW and calculate 40% of this total. The answer is the Fog Index (FI) for that piece of writing.
- The lower the FI the more readable is the work. You should aim for a FI of 12 or less. If the FI is greater than 12, either shorten your sentences or use simpler words or do both. This should prevent the fog closing in".

FI scores

28. Using that definition an examination was made of four clauses from one of the standard documents. They are four which are commonly quoted in disputes. The best scored an FI of 17, the worst 55, and the average was 28.

An example

29. Having committed myself to this cause I must give an example of how I believe these solutions could be worked out. In the FIDIC Conditions Clause 2(2) scores an FI of 21 for the first paragraph alone. It could be re-worded thus:

- "2 (2) The Superintending Officer shall report to and be responsible to the Senior Technical Officer. The Superintending Officer shall normally be on the site and his duties shall include:-
- a) To watch and supervise the Works.
 - b) To test and examine materials brought to the site in connection with the Works.
 - c) To test and examine workmanship employed in connection with the Works.
 - d) To check setting out and site measurements made by the Contractor.
 - e) To inspect alleged site difficulties reported to him by the Contractor, and make agreed records.
 - f) To authorise any variations in the Works for which he shall have written authority from the Senior Technical Officer.
 - g) To receive the Contractor's interim accounts, check them, agree corrections with the Contractor, and despatch them to the Senior Technical Officer for audit and certification.
 - h) To keep a continual check on progress of the Works and check the causes of apparent lateness.
 - i) To carry out other duties as the Senior Technical Officer may delegate to him in writing".

For the record, this re-wording scores an FI of 11.

DISPUTE RESOLUTION

30. "Let wars yield to peace, laurels to paeans". (Cicero).
It cannot be denied that the most successful contracts are those where everyone works in complete harmony. Yet, it would be stupid to deny that this ideal state always exists. The frailty of human beings is such that disputes are bound to happen. It is a true saying that the Engineer who has never made a mistake has never done anything.

31. If we therefore accept the inevitability of disputes what can be done to minimise them and their effects? I believe that the very name 'Arbitration' sometimes strikes fear into the hearts of some people. It should not. After all, the Arbitrator will usually be a fellow professional and the proceedings should be conducted confidentially.

32. Why not then take a fresh look at the Arbitrator? Why not work out a new role for him under the contract? Why not nominate your Arbitrator when drawing up the contract, so that he is known to both parties, and his appointment already exists? Why not use him whenever any potentially contentious situation arises? He can make his decisions in the form of Interim Awards and publish his Final Award at completion of the contract. By using your Arbitrator more fully and involving him earlier, totally implacable disputes should be reduced, and minor disputes resolved whilst the facts and material evidence are still fresh. It could also be that if the Arbitrator is moved up from Long Stop to Short Stop then the parties might try to do some fielding themselves, and find they can get on together after all!

CONCLUSION

Literary work or literate?

33. Whilst I do not pretend that contract documents should be literary works of art, they should be capable of being understood by the ordinary person who will have to use them. A lot of money has been spent in the last two decades on the world literacy programmes. At the Persepolis Symposium in 1975 (Ref.10) it was stated then:

"The very process of learning to read and write has been made an opportunity for acquiring information that can immediately be used to improve living standards, ... mastery of the environment ...".

Professional obligation

34. As engineers, it is a duty arising from our professional obligations that we should be assisting our fellow men. We do not necessarily fail, but we do not make things easier by using documents which are even attracting criticism from within the countries of their origin. (Ref.11).

35. Is it too late to take a completely fresh look at what we are trying to achieve?

REFERENCES

1. FIDIC. Conditions of Contract (International) For Works of Civil Engineering Construction. 3rd Edition. March 1977.

2. INSTITUTION OF CIVIL ENGINEERS (ICE). Conditions of Contract For Overseas Work Mainly Of Civil Engineering Construction. 1st Edition. August 1956.

3. UFF John. Construction Law. Concise College Texts. Sweet & Maxwell. London 1981. (a book)

4. WALLACE I.N. Duncan. Hudson's Building and Engineering Contracts. 10th Edition. Sweet & Maxwell. London 1970 (Supplement 1979). (a book)

5. ABRAHAMSON Max W. Engineering Law and the I.C.E. Contracts. 4th Edition. Applied Science Publishers. London 1979. (a book)

6. WALLACE I.N. Duncan. The International Civil Engineering Contract. Sweet & Maxwell. London 1974 (Supplement 1980). (a book)

7. WOOD R.D. Building & Civil Engineering Claims. 2nd Edition. The Estates Gazette Ltd. London 1978.

8. STEVENSON James. New Civil Engineer.

9. MADGE B., BARR B., BEVAN A., DAVIES M. The I.C.E. Essays. Thomas Telford Ltd. London 1981. (a book)

10. UNESCO SECRETARIAT. A Turning Point For Literacy. Proceedings of the International Symposium for Literacy, Persepolis, Iran, 3 to 8 September 1975. Pergamon Press. Oxford 1976. (At page 21, from a Paper delivered at the Symposium).

11. JACKSON Rupert. Are Standard Forms of Contract a Good or Bad Thing? Construction Industry Law Letter. London, February 1985. (from a periodical)