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THE USE OF EXPERTS IN INTERNATIONAL CONSTRUCTION ARBITRATIONS

Introduction

1. The use of experts in international construction arbitrations is widespread and increasing all the time. I would like to make some observations, based on my experience, as to how the use of experts works best and the pitfalls to be avoided in their use. I shall concentrate, during my remarks, on the use of programming experts in a typical contractor's claim for extensions of time and additional compensation on account of delay and/or disruption to the completion of the contract works. Whilst the use of programming experts in this category of case used to be considered a luxury, those days are gone and nowadays it is most unlikely that one would find such a claim being advanced in an international arbitration without the assistance of programming experts. However, much of what I say in this talk applies equally to the use of experts from other disciplines in construction arbitrations.

The Typical Delay/Disruption Claim

2. A properly prepared delay/disruption claim will usually depend on three classes of evidence, factual witnesses, expert witnesses and the contemporaneous documents. It cannot too often by emphasised that finding the existence of delaying events, assessing the effect of those events on the progress of the contract works and finding the length of critical delay (if any) caused by those events, are all questions of fact which must be proved by factual evidence from witnesses and the documents. An expert can only give evidence of opinion

and he should not even attempt to give evidence of what actually happened on site unless he himself was present on the job at the time. The programming expert is totally reliant on the documents and the factual witnesses in order to discover what actually happened on the site. Thus, when properly considered, the scope of legitimate expert evidence in claims of this sort is limited and many successful claims have been advanced in the past without the assistance of independent programming experts at all. Such claims can be proved by the factual witnesses who were on site at the time of the relevant events, coupled with a delay analysis carried out by, possibly the contractor's programmer or quantity surveyor who has some experience of preparing and operating contractors' programmes.

3. This important distinction is sometimes forgotten. Often nowadays these claims are advanced based almost entirely on the contemporaneous documents and on the programming expert's report which is usually very long. The use of factual witnesses is often kept to a minimum for reasons which may appear to be sound, for example, language difficulties, desire not to distract key personnel from profitable company business, the absence of key personnel who may have moved on to pastures new and the sheer sweat of having to produce a detailed, often lengthy, factual witness statement from a witness who would rather be anywhere else than in a solicitor's office. However, these temptations should be resisted, There is no more compelling evidence in a delay claim than hearing from the workmen, foremen, gangers and project managers who were on site at the relevant time and who actually experienced the effects of delaying events on the works. To a tribunal such evidence is far more compelling than hearing the theories of a programming expert who may have come on the scene years later and who expresses opinions as to what was the effect of a particular event on the progress of the works. To put it another way, a delay claim can be mounted and won without the assistance of programming experts, but it is

likely to fail if it is unsupported by factual evidence, no matter how good the programming expert may be.

4. There is another powerful reason for producing detailed factual evidence in support of a claim. If the programming expert, for whatever reason, e.g. lack of experience, lack of independence, lack of competence or lack of judgment, is not considered to be reliable by the tribunal, a contractor's delay claim can still succeed if its factual evidence is detailed and compelling. It may just need some careful analysis by counsel to present it as an alternative to the expert's views.

The Limitations of Expert Evidence

5. Where a programming expert is brought in after the job has been completed, which is well before any factual witness statements are taken, the expert will ask for and read as much of the contemporaneous documents as possible and will begin to form his views based on that material. This process may take a long time and may result in the production of several reports before the expert sees any factual witness statements. This is not helpful and it is better if the claim is prepared in the reverse order. Once it is known that the contractor intends to mount a claim, the first thing that should happen is that detailed statements should be taken from the factual witnesses who were involved with the project as soon as possible. This ensures that those witnesses are still available to the contractor and also that their memories are relatively fresh. Then, once the programming expert is appointed, he or she will receive the factual witnesses' statements with the contemporaneous documents which will make everyone's life a lot easier and likely to lead to less work in the long run. It will also avoid the embarrassment, which can occur, when an expert says that he has prepared his report without having seen any factual witness statements but that, after seeing them, he has no reason to change anything in his report! Such statements, which I have often seen, do not enhance the credibility of the expert in the eyes of the tribunal.

Use of the Contractor's Programme

6. At the outset the programming expert has to decide, if there is a programme in existence at all, which of the contractor's programmes to use as the baseline for his delay analysis. It sometimes happens that the contractor's programme is quite inadequate for this purpose, so what is to be done? The expert can either use the contractor's programme and improve it in order to make it useable by way, for example, filling in any gaps and inserting logic links where they seem to be called for. Alternatively, the expert can simply conclude that the Contractor's programme is unusable and develop a baseline programme of his own. Unfortunately if either course is adopted, it is unlikely that the expert for the employer will agree with the baseline programme produced by the contractor's expert which makes room for later agreement between them rather slender. It is also a nightmare for the tribunal which will find itself comparing apples with pears rather than with apples.

7. In order to avoid this type of situation, at the earliest possible stage, the arbitral tribunal should give directions along the following lines. The parties (if they intend to use programming experts) should be required to appoint those experts at once (if they have not already been appointed) and those experts should be required to meet in order to attempt to agree the following matters:-

(i) the baseline programme to be used for their analysis;

(ii) the as-built programme of the works;

(iii) the methodology to be used in the delay analysis;

(iv) the software to be used for this purpose;

(v) where the critical path runs through the project;

(vi) which events are the key delaying events, as viewed by each party.

If the experts are unable to agree on any of these matters within a pre-determined time, then they should be required to return to the tribunal in order to explain their difficulties so that the tribunal can give further helpful directions as to how they are to proceed. By this means, which are usually successful, both programming experts will be approaching the complexities of the appropriate delay analysis on a similar footing which will enable them to make appropriate agreements with each other as they proceed and, most importantly, will enable the tribunal to compare and assess their respective analyses without having to itself start from scratch. Since much agreement ought to come out of this process, it will also enable the tribunal to concentrate of the areas of disagreement and each expert's reasons for them, rather than having to concentrate on the whole of the delay analysis, which is often extremely burdensome.

The Tribunal's Expectations of the Expert

8. Obviously the tribunal will expect the expert to be competent, honest and have the necessary experience in the particular field. The tribunal will also, and crucially, expect the expert to be and remain independent of the party instructing him or her and be able to demonstrate that in his evidence. The tribunal will also expect the expert to express his opinion based on the proven facts, and not on what the expert himself thinks the facts are, if they are not stated in evidence. In order to accept an expert's evidence the tribunal will want to be satisfied as to all of the above qualities and also that the expert has been objective throughout. It is not sufficient to be objective unless one is seen to be objective as well. This means that an expert cannot cherry pick the information upon which he relies, for example by relying only on his party's witness statements and ignoring the other side's. For, as soon as an expert is perceived to lack objectivity, then he may be deemed to be partial by the tribunal which will affect what weight (if any) the tribunal places upon his opinions.

9. There is nothing wrong with an expert changing his or her opinions so long as they have good reasons for doing so. Very often opinions are expressed at an early stage without the expert having full or complete information. In such cases, it is natural for an expert to

change or modify his opinion once he has further information and no criticism can properly be made of doing so. But the reverse does not follow. One of the most unimpressive things an expert can do is to maintain his original opinion when the facts upon which that opinion was based turn out to have been wrong or incomplete. The expert who sticks to his guns through thick and thin, regardless of what developments may have taken place in the case, makes a fool of himself and loses credibility with the tribunal. On the other hand, the expert who openly accepts than an earlier opinion was incorrect or needs to be modified for cogent reasons will earn credit with a tribunal.

10. In order to impress the tribunal and be seen to be reliable an expert should try to achieve the following, as a bare minimum:

(i) Keep his report succinct and carefully focused on the issues in the case. Over lengthy and diffuse reports are not impressive.

(ii) Do not accept at face value the whole case put forward by the client but, rather, investigate and test the client's case at every stage and be prepared to disagree with it as appropriate. In short, establish your real independence from the client.

(iii) Be prepared to change your mind, if you have good reasons for doing so. This will enhance your credibility with the tribunal whereas, if you fail to do so, the reverse may follow. But try to avoid changing your mind too often, which is the equivalent of the factual witness who says *"I don't remember"* too often.

(iv) In cross-examination make concessions where they are properly to be made. A tribunal wants to see whether you are open minded and fair.

(v) Above all an expert should do everything possible to establish and then keep his credibility with the tribunal. For if, at the end of the case, an expert's credibility and reliability remain in tact, then the chances are that the tribunal will place considerable weight on his opinions. By the same token, if an expert's reliability and credibility have been significantly damaged during the case, a tribunal will place far less weight, if any, upon his opinion, in which case the opinion of the other side's expert is likely to be preferred.

11. It needs to be remembered that, frequently, a tribunal will be asked to make decisions in areas of expertise about which the tribunal may know little and have little or no experience. It is sometimes a scary thing for arbitrators to have to make serious decisions on technical matters, which may have a dramatic effect on the parties, in fields which are foreign to them. In such an environment, the tribunal will look to the parties' experts to act as their guides to lead them through unchartered territory towards the right result. As with any guide, if the tribunal loses confidence in his reliability and/or expertise, it will be disinclined to follow him where he would like to lead them. In such circumstances, the tribunal is more likely to be guided by the other party's expert. But, in some cases, it happens that both parties' experts are discredited during the hearing process in which case the tribunal may well feel exposed and become cautious about making findings in the absence of reliable expert evidence.

Challenging the Expert in Cross-Examination

12. With the comments made in the preceding paragraph in mind, it is not difficult to understand why counsel feel that it is important to do what they can to damage the credibility of the other side's expert in the eyes of the tribunal. For, if this attempt is successful, it will go a long way to winning the case for counsel's client if the outcome

depends upon technical evidence. The arena for this particular form of blood sport is known as "cross-examination" which, as I see it, can take two quite different forms.

The "External Approach"

13. This is the safe (if not soft) way of cross-examining an expert since it does not expose the cross-examiner's ignorance of the subject matter nor does it run the risk of the expert giving an answer which can win the case for his client. Using the external approach, the cross-examiner will ask the expert about all sorts of matters, most, if not all, of which have nothing or very little to do with the facts of the case. For example the expert can be asked about the following topics:-

- His qualifications;

- His experience (e.g. *"Have you ever prepared a contractor's programme yourself and have you ever operated one throughout a job?");*

- Preparation for the case (e.g. *"Have you read the witness statements and the pleadings of both sides?");*

- Independence of the client (e.g. *"How many times have you worked for this client before? Were you every employed by this client?"*);

- Consistency (e.g. *"In your first report you said that the delay caused by the gas explosion was 17 weeks, in your second report you said it was 10 and in evidence you said you were not sure whether it was 2 or 10 weeks."*);

- Credibility (e.g. *"In such and such reported case the judge did not accept your evidence because he considered you were not independent. Is that true?"*)

It will be seen that the external approach attempts to damage the expert by discrediting him in relation to matters which do not bear directly on the technical opinions of the expert. This approach is favoured by some American counsel and it is a low-risk strategy since it does not allow the expert to reveal his or her competence or experience or to dominate counsel. But it is also a low-yield strategy since an experienced tribunal will be less than impressed by counsel who is "willing to wound, but afraid to strike" and who lacks the confidence to get to grips with the expert in his own field of expertise.

The "Internal Approach"

14. With this approach, the advocate takes his life in his hands since he deals with the facts of the case and with the opinions expressed by the expert on the matters in his report. It means that the advocate must, with the help of his own expert, get to know and understand the technical issues at stake and also to understand sufficient of the logic and reasoning behind the expert's opinions so that he can "*take on*" the expert on his own home ground. This is a high-risk strategy since, if the expert is impressive and the advocate is not, the expert will soon demonstrate his mastery over the advocate which will enhance his credibility with the tribunal. However it is also a high-yield strategy since, if the advocate does his job well, he may be able to show that, on technical grounds, the expert's opinions are rubbish and that the expert is lacking independence. Thus this type of cross-examination can be a case winner or a case loser and, as a result, it is highly entertaining to watch and extremely exciting to undertake.

15. Thus, adopting this approach, the cross-examiner may deal with the following topics:-

- The contents of the expert's reports;

- The methodology adopted by the expert;

- The selectivity of the evidence upon which the expert has relied;

- The amendments or the "*improvements to the contractor's programme*" which the expert has made before starting his analysis;

- The periods of delay to the critical path ascribed by the expert to a particular delaying event;

- (If you are feeling extremely brave and confident) you may ask the expert where the critical path runs through the job and why he has not taken any account of concurrent delays;

- Finally, the overall conclusions which the expert has reached on the causes and extent of delays to the critical path.

16. Of course counsel will often adopt both approaches either sequentially or concurrently, by boxing and coxing between them. Remember that an advocate's greatest weapons are the choice of the topic to deal with and the choice of what question to ask next. That is how he gains and maintains control over the witness.

Consequences of a Successful Challenge

17. If a programming expert is shown to lack credibility and his conclusions are therefore shown to be unreliable, the dividend to the other side can be enormous. For, if the tribunal cannot place much weight on the programming expert's evidence, it is likely to prefer the evidence of the programming expert for the other side, unless, of course, he too suffers from a similar disadvantage. If the other side's expert's evidence is preferred, it is likely that the tribunal will make findings more or less in accord with that evidence or, at least, favouring that

party's case more than the party with the discredited expert. The result may be that the case on delay/disruption put up by the party with the discredited expert fails and the other party's case succeeds. That may well lead to the successful party winning the whole arbitration in terms of the amount of the award. Everyone knows that, in usual circumstances, "*costs follow the event*" which means that, generally, the successful party recovers his legal costs and expenses (including his expert's fees) from the losing party. Such an outcome is, of course, a disaster for the losing party and that disaster can all be traced back to the loss of credibility of that party's programming expert.

How can such a disaster be avoided?

18. It is fairly obvious from the above that it is in every client's interests to do whatever he can to ensure that the credibility of his expert is not successfully impugned before the tribunal. In order to achieve this the client, advised, of course, by his lawyers, can take the following steps which will protect him, so far as possible, from the consequences of having a discredited expert. The client and his lawyers should be astute to take the following steps:-

(i) When appointing an expert, do your homework and discover whether or not the expert has a good reputation for competence, expertise, experience and independence. Do not appoint an expert who is known to be partial to his client's case, since it may be very comforting as the case progresses, but rather less so when the award is delivered.

(ii) Throughout the employment of the expert, emphasise to him that you expect him, at all times, to express his independent views and to tell you, the client, whenever he has doubts about the client's case or cannot accept parts of it. This process should be iterative.

(iii) From time to time test the expert on his conclusions, with the assistance of counsel if possible, to see if they will stand up to close scrutiny.

(iv) Make sure that there are facts which can be proved by the witnesses or by the documents which support the expert's views.

(v) Call factual witnesses who have signed detailed statements to prove the facts upon which the expert's opinion relies.

(vi) Make sure that, if the expert changes his mind, such changes are identified and explained in a supplementary report served by the expert. There is nothing worse than an un-advertised change of mind coming out for the first time in cross-examination.

(vii) Do not get too close to the expert or let him get too close to the client's legal team. Distance encourages independence.

19. But if all this fails and the programming expert's credibility is seriously damaged before the tribunal, all is not lost. Remember that the tribunal will have heard detailed factual evidence from the client's witnesses which, usually, since it is based upon recollection and the contemporaneous documents, is hard to contradict in cross-examination. With that factual evidence as a basis, the client's counsel can make submissions that the proven facts justify certain extensions of time in any event, whatever the tribunal may think of the client's programming expert. Thus the client should see his factual witnesses as providing a second string to his bow which is available if the programming expert is neutralised. For, if a tribunal concludes from the credible factual evidence of the client's witnesses that the client was indeed delayed and progress disrupted by events for which the client is not responsible,

at that stage, the tribunal will feel inclined to make an award in the client's favour, if it can. It does not need a programming expert to tell it what the consequences in terms of extensions of time are, if it has heard cogent arguments from counsel, based on the factual evidence, which lead to certain conclusions. It may also be that the evidence of the other side's expert can also be prayed in aid, particularly if he has made agreements with the client's own expert during the course of the arbitration. In essence, many tribunals will feel more confident in making awards in delay claims based upon having heard cogent factual evidence from the persons actually employed on the site than it will if such evidence is missing or tenuous and its absence is sought to be made good by imaginative theories from a programming expert who has never been anywhere near the job.

Conclusion

20. Having said that, lest it be thought that these remarks are overly critical of programming experts, that is not my intention. Many programming experts give great assistance to tribunals in carrying out what can sometimes be a fiendishly difficult exercise. Most complex delay/disruption claims will benefit from the assistance of a programming expert at some stage, and in some manner, but the thrust of these remarks, if they have any, is that there is no substitute for detailed factual evidence coming from witnesses who know what they are talking about in these claims. In recent years, I have noticed that the role of factual witnesses has diminished and the role of programming experts has increased commensurately, which is having results which are not widely understood and which need to be recognised by those who decide how to prepare, advance and manage delay/disruption claims. These claims depend upon the facts which an expert, limited to giving opinion evidence, cannot prove.