

Issue No : 7
Published : Autumn 92
Article No : 1
Author : Roger Trett
Title : Proactive or Reactive?

The Construction Industry is still in a downward spiral which will deteriorate further if current government thinking threatens the future of major infrastructure projects. It is difficult to comprehend that government of whatever political persuasion, cannot take on board the fact that it has an enabling obligation. Government has to make it possible for investors to invest. The Construction Industry, in particular housing, is the barometer to the well being of the economy. With the devalued pound and much lower interest rates we may be able to generate manufacturing and become more competitive.

In order to regenerate industry; government at local and national level have to look at providing infrastructure. How much better the London Docklands would be now if a proper infrastructure had been thought out and put in place. People and employers would have been happy to move there and there would have been substantial rates income, effectively providing a return on development costs.

The Channel Tunnel is a prime example where very little infrastructure exists this side of the channel to take advantage of the facilities being provided.

Recovery from this slump would come about much faster if goods and services were able to move about the country on a radically improved transport network. Such investment would act as a catalyst to the recovery process. As and when recovery does take place it is likely to be frustrated by a communications network which is inadequate even for the existing depressed market conditions.

Let us be proactive rather than reactive, effective rather than defective.

Issue No : 7
Published : Autumn 92
Article No : 2
Author : Jeff Whitfield
Title : Roll Up, Roll Up

Jeff Whitfield puts the latest judicial responses to global claims under the spotlight.

When a plaintiff approaches the courts for a remedy for some wrongdoing he is obliged to particularise his case sufficiently to allow the defendant to properly answer his points of claim. It is for the plaintiff who seeks a remedy to show that he has been wronged, that the wrongdoer was the defendant, that the wrongdoing caused the plaintiff damage and that the damage resulted in the plaintiff suffering financially.

In order to fulfil these obligations the plaintiff must show that the defendant owed him a duty or an obligation, that the defendant failed in that duty or obligation and that as a direct result he, the plaintiff, suffered damage. The plaintiff is then expected to reasonably calculate and prove the cost of that damage.

In terms of a construction dispute the plaintiff should aim to prove points 1-4 below.

1. The Existence of an obligation.

The plaintiff must show that there was a legally binding contract between the parties and must also show that the terms, upon which he relies for his case, were incorporated into that contract. It may surprise people outside the industry to find that a very significant number of claims need judicial intervention to establish even these somewhat basic facts.

2. A Breach of an obligation by the defendant

Having established that the defendant has certain obligations to the plaintiff under the terms of the contract the plaintiff must properly explain which of these obligations have been breached, when they were breached and how they were breached.

3. That Damage arose from the Breach of an obligation

The plaintiff, having established a breach, must show that the breach caused some damage. Not all breaches do cause damage and on many occasions this step is overlooked by the plaintiff.

4. Losses or costs were incurred as a result of the damage

The main reason for seeking a remedy from the courts is to recover financial losses or out of pocket expenses arising from the damage caused by the breach. Of course if a plaintiff feels strongly about a breach which has no financial effect he can still pursue the case but the legal

costs may well exceed his recovery. To successfully recover the damages sought it will be necessary to prove that the losses claimed are reasonable and that they do inevitably follow the breach.

Cause and Effect

In some complex constructional disputes it is difficult to accurately identify how a breach affected the plaintiffs work and subsequently how the breach left him out of pocket. Too frequently plaintiffs try to avoid the detailed investigation necessary to fully particularise their claims by submitting a global or rolled up claim.

A global claim will often approach the four steps noted earlier as follows:

a) It may claim that there was no contract at all, or that some of the terms were not incorporated. Alternatively, if the contract seems unimpeachable, it may be argued that certain terms have a more limited meaning than the words suggest. The hope is that the court will either accept a quantum meruit claim or that a breach will be easier to prove.

b) The global claim will often list a vague and varied list of unparticularised breaches, many of which have some merit but few that are properly supported by real evidence. By this tactic it is hoped that the court will accept that, although no firm evidence is offered, there is no smoke without fire and that some breaches must have occurred.

c) If evidence is sparse as to the effect of the breaches there is likely to be little evidence showing the damage that resulted. In the absence of such proof of damage a global approach is adopted. An example of this approach would be the words:

"But for the above breaches of the client we would have completed our works on day 67, however we were only able to complete on day 90. We therefore require an extension of time for 23 days".

d) Calculating losses or out of pocket expenses requires the same detailed research involved in identifying the damage, the global claim will often offer a quick method of quantifying loss. Typically a global claim would offer the simple formula:

Total costs incurred on the contract

less: Tender figure

less: Recovery on dayworks and variations

Thus intimating that all "losses" arose due to the breaches of the defendant.

The global approach has been rejected by the courts where it does not prove its case by supporting evidence. It is used either as a shortcut method (laziness) or because the evidence is no longer available. In either case it is not likely to win the sympathy of the courts.

Where a global claim is pleaded, the plaintiff will have two major hurdles to overcome. The first is that the defendant may have grounds to have the case struck out for want of proper prosecution, as was the case in *Wharf Properties-v-Eric Cumine Associates*. The second hurdle is that if any part of the global claim is proven to be wrong, then the whole case may collapse.

Striking out

In *Wharf Properties-v-Eric Cumine Associates*, the defendant, Architects ECA, were disturbed by the poor quality of the case that they were expected to answer and expressed their dissatisfaction to the court. Wharf Properties, the employer, were given the opportunity to provide further and better particulars of their case. However, despite the voluminous nature of the "furthers and betters" Wharf did no more than state that the number of variations issued by ECA was excessive and that taken cumulatively they caused the delays about which Wharf were complaining.

ECA applied to strike out the action and at first instance they failed. Later on appeal to the Hong Kong Court of Appeal they were successful. The case then came to the House of Lords where their Lordships were asked to reinstate the action. Lord Oliver in rejecting the appeal and striking out the action noted that the Rules of the Supreme Court required that:

"Wharf should establish a nexus between the contract, its breach, the events immediately consequent upon this breach and that this led to the financial losses claimed".

Obviously Lord Oliver believes that if the nexus is not established, the plaintiff's case is at risk of being struck out.

Failure to prove the case stated

The courts are naturally reluctant to deprive a plaintiff of a remedy by striking out unnecessarily and so they often allow the plaintiff time to remedy a defect in his pleadings, right up to the hearing date.

Some commentators suggest that this allows a cunning plaintiff to muddle through the preliminaries with an apparently poor case only to present a much better case at the hearing. The plaintiff does this at the risk of being held liable for the costs arising from his actions.

Using a global method to provide the nexus and to prove cause and effect is a gamble. The gamble is that if any part of the claim can be proven to be incorrect then the global sum claimed must also be incorrect, and, if no other measure of loss is available then the claim may fail entirely.

Ian Duncan Wallace points out, in his book *Construction Contracts*, that global or total loss claims often ignore the hours that are inevitably lost on every contract due to weather, labour shortage, poor supervision, bad site organisation and faulty estimating. He further contends that if evidence is presented clearly showing that losses were incurred on one of the above headings then the tribunal hearing the matter will have insurmountable difficulty in finding for the plaintiff, if he has only submitted total loss evidence.

Satisfying the Courts

As we read Lord Oliver's 5 comments in *Wharf Properties*, the rules of the court require that a link is proven to exist between the contract, its breach, the events consequent upon the breach and the financial burden resulting therefrom. There are a number of cases which assist in understanding just how far the judges expect the plaintiff to go in identifying these links.

A useful summary of the law in this area is provided in the case of *Mid Glamorgan County Council-v. Devonald Williams & Partner*, where Mr. Recorder Tackaberry QC reviewed the relevant cases.

Before considering *Crosby-v-Portland UDC*. The Recorder suggested that a balance must be achieved between the defendant who must know the case he has to answer and the plaintiff who must not be shut out from the seat of justice. He notes, however that in our legal system the burden of proof lies on the plaintiff and so the plaintiff must find the information necessary to prosecute his claim in a way that is fair to the defendant. Acknowledging the difficulties in fully detailing some part of the case Mr. Recorder Tackaberry said that he would expect the court to consider the circumstances and decide whether to let that aspect of the case continue. It is to be noted that he used the words "some part of his case" and did not refer to circumstances where the whole case lacked detail. To assist in making his decision he went on to cite the relevant cases.

In the *Crosby* case the arbitrator had made a supplemental award in respect of a number of items where monies could not be specifically allocated because individual items could not be identified. Donaldson J. in accepting that the arbitrator was permitted to make such an award said:

"I can see no reason why he (the arbitrator) should not recognise the realities of the situation and make individual awards in respect of those parts of... the claim which can be dealt with in

isolation and a supplementary award in respect of the remainder of these claims as a composite whole".

In Crosby the plaintiff had satisfied the court as to the defendants liability for delay and so the above decision related only to the allocation of damages. This point was highlighted in *London Borough of Merton-v-Hugh Stanley Leach* a later case heard by Vinelott J. where he agreed with Donaldson J. in Crosby saying:

'A rolled up claim can only be made in a case where the loss and expense attributable to each head of claim cannot in reality be separated .. a rolled up award can only be made where apart from that practical impossibility, the conditions which have to be satisfied before an award can be made have been satisfied in relation to each head of claim".

Conclusion

It is suggested then that the outcome of these cases provides two guidelines on preparing rolled up or global claims.

1. Where delay or damage is proven and all of the conditions applicable to every such event have been satisfied but it is impossible for the plaintiff to divide the financial loss between the various heads of claim, then the plaintiff may still succeed.
2. Where there has been delay or damage but the plaintiff cannot show or does not try to show precisely what caused each event and how it affected the outcome for each event, then he will probably fail.

The last authoritative words on the subject, for the time being, come from Lord Justice Lloyd in the Court of Appeal giving Judgement on *McAlpine Humberoak Ltd-v-McDermott International Inc.* as recently as March this year. The expert witness for McAlpine had failed to convince the Appeal Court by his global disruption calculation, though the trial judge seemed swayed by it. Lord Justice Lloyd said:

The judge dismissed the defendants approach to the case as being a retrospective and dissectional reconstruction by expert evidence of events almost day by day, drawing by drawing, TQ by TQ and weld procedure by weld procedure, designed to show that the spate of additional drawings which descended on McAlpine virtually from the start of the work really had little retarding or disruptive effect on its progress! In our view the defendants approach is just what the case required".

If the Lord Justices of Appeal think that this is what was required perhaps we should take note.

Issue No : 7
Published : Autumn 92
Article No : 3
Author : Mike Marshall
Title : Designed to Confuse Part II

DESIGNED TO CONFUSE

PART II of Mike Marshall's article on Shared Design Responsibility

In the first part of this article (see Digest, Issue No.6) I outlined some examples of situations in which a shared responsibility for design might arise, I looked at what we mean by "design" and I reviewed the obligations which a designer undertakes. So, the scene is set and it's now time to confront the difficult bits!

Reasons for Design and Build -the Theory

Readers may find it useful to begin by exploring why the Contractor should be involved in design in the first place. After all, the perceived wisdom, certainly in the UK if not in other parts of Europe, is that Architects and Engineers, acting as consultants to the Employer, are best equipped by virtue of training and practice to prepare the design in great detail and to supervise the construction. On the other hand, the Contractor's main strength, resulting from experience, lies in his superior ability to select the best and most economical method of achieving the permanent work as defined by the design, often in the face of considerable difficulties.

The question must be approached in two parts. Firstly, there are those projects which are "simple" in terms of technology and where there is widespread expert knowledge of this technology, both amongst Consultants and Contractors. The proponents of design and build argue that the traditional method of procurement encourages an adversarial approach whereas the design and build method enables good quality projects to be produced more quickly and at lower cost. This is achieved because there is "single source responsibility", attitudes are changed and wasteful practices are eliminated. However there are, as the Americans are said to relate, "no free lunches" and in his paper to a recent Design and Build Conference, Mr. Robert Mathieson, Group Manager of the Commercial Development Division of Capital and Counties plc said:

"The major disadvantage in using a Design and Build Contract is if you change your mind. These decisions can be expensive and result in major delays and the client's cost advisors are rarely able to agree changes that represent good value to him".

(Design and Build for Major Projects, London, April 1992)

In the second category are those contracts where the technology is advanced or specialised (for instance a lot of modern process plants). Here, the Contractor may alone possess the specialist knowledge and skill to design the works and the Employer may be more or less compelled to rely upon this knowledge. It follows that the Contractor, in a practical sense, must have a much greater degree of control over the project than would normally be the case with traditional arrangements.

In both cases, but to a greater extent in the latter, the Employer must accept a limited ability to order variations which may interfere with the validity of the Contractor's design. He must also allow the Contractor to unilaterally vary the work (although this should not necessarily entitle the Contractor to additional payment).

Generally the Employer must have a considerable degree of confidence in the skill and integrity of the Contractor since the involvement of his own professional advisors will, or should be, limited and therefore of reduced value in protecting his interests.

As a footnote, an Employer might reflect carefully upon the wisdom of entering into a design and build arrangement of any kind when he is primarily concerned with durability.

From Theory to Practice - How things Go Wrong

Human nature being what it is, it was inevitable that the theory of design and build, when applied in practice, would be distorted to varying degrees. This distortion involves the erosion of the design and build function, so that the Employer seeks to impose an extremely detailed scheme on the Contractor on the one hand and requires the Contractor to adapt it as his own design on the other. Whilst the advantages of such a regime, from the Employer's point of view can readily be appreciated, the complexity of definition which is required in order to afford the necessary standard of clarity and certainty in the contract documents is rarely achieved.

An example of this widespread practice is where the Employer commissions consultants to prepare detailed specifications and drawings which may be very similar, in design development terms, to that present in the documents used to invite tenders under traditional arrangements. However, the Contractor's obligations are expressed in design and build terms so that, in effect, the design is not the Contractor's own interpretation of the Employer's requirements at all. This is usually coupled with an insufficient period for the preparation of tenders.

This presents very great problems of interpretation with regard not only to the intentions of the parties, but also to relative obligations in matters of design. If the Employer's requirements are described in considerable detail, the question arises as to whether or not some or all of these details are mandatory requirements. Such

requirements or criteria will, by definition, restrict or limit the Contractor's freedom of action but, importantly from the Employer's viewpoint, will indicate that no reliance is placed upon the skill and judgement of the Contractor. If this is the case the Contractor's fitness for purpose warranty may be compromised.

On the other hand such criteria may not be mandatory but simply be an indication of how the Contractor might proceed but without prejudice to his freedom to innovate.

Many contracts of this type are vague with regard to the meaning of many of the Employer's details. This may lead to the unhappy situation where the Employer may insist upon compliance with his own design in the event that the Contractor decides to depart from it. Alternatively if the Contractor does comply and the Employer's design is found wanting, the Employer will attempt to argue that the Contractor is responsible for the extra work in putting things right.

Transferring Risk - The Need to Be Commercial

Another "hybrid" approach is where an Employer possesses in-house design resources which are sometimes quite substantial. The Employer's expertise and experience in a particular field, may be greatly superior to that of the Contractor. In practical terms, the Employer needs to exert very detailed control over the contract in order to ensure that the completed project incorporates the latest developments in a technology which may be advancing at a prodigious rate.

This need to keep up to date with a rapidly changing technology results, in many cases, in the design continuing to be developed throughout the construction period. In some extreme examples, it might be argued that certain very large and complex industrial plants are never in

fact completed. Modifications and revisions to the design of the various elements continue throughout construction and thereafter. The Contractor often negotiates a cost plus type of arrangement to "stay on" after the "completion" to carry out modifications.

Contractors have not been particularly slow in exploiting this state of affairs. Certainly, some contracts in the past have been completed on a re-negotiated basis in some sectors of the industry almost as a matter of general practice and without proper justification.

Partly because of this, and also because of the perceived need to be "more commercial", many Employers have followed a policy of seeking to transfer risk to the Contractor. To achieve this, they have tried to introduce design and build principles into their contracts despite their acknowledged superior design expertise.

One approach adopted by Employers, is to define the "core" of the project in some detail and to retain responsibility for this element of the design. The Contractor is expected to carry out the 'detailed design' although this term is rarely defined and I use it here simply because it is in general use. The Contractor may also have to design any part which has not been designed (or conceived) by the Employer.

Unless this type of contract is very carefully and clearly defined, it will invariably lead to a great deal of confusion and uncertainty over precisely who is supposed to do what. There may be several hundred people from both sides involved in the design and the subsequent engineering detailing. It is essential that they have a proper comprehension of what they are required to do in order to comply with each party's contractual obligations.

Sadly, this is rarely the case and importantly, design engineers seemingly assume the Contractor is wholly responsible for design irrespective of which side they represent. Quite why this is so, I am not sure but it probably derives from the mistaken impression that a 'design and build' contract means what it says! In many cases, the elaborate attempts to draft a contract to give effect to the true intentions of the parties results only in a vast compilation which is virtually incomprehensible.

Ultimately of course each separate element of the design is affected by every other element, or might be. It is this uncertainty which promotes the difficulty of definition since it is virtually impossible to isolate the core concept, for which the Employer remains responsible, from everything else. Frequently, the Employer's design will require revision or it may be flawed and depending upon circumstances, this can affect most if not all of the Contractor's design.

Unfortunately it is not always easy to detect at the time that the reason for the Contractor's difficulties in the post-contract design stage, are directly attributable to shortcomings in the Employer's original design. Because the demarcation between respective design responsibilities is uncertain, what tends to happen is that the Contractor's design staff attempt to overcome a difficulty which they perceive as their responsibility.

By the time the alarm bells start to make themselves heard, usually activated by the ever steepening curve of the Contractor's design costs, it is too late to correct the problem.

More Confusion - I'll Start and You Finish!

A third variation on the hybrid theme is where the Employer retains responsibility for the design of the project up to a certain point. The idea is that once that point is reached, the whole thing is then handed over to the Contractor who must complete the design ("detail" the design) and carry out the engineering and procurement in one integrated operation.

This is all very well in theory but again it is notoriously difficult to define contractually with the necessary degree of precision. In practice, the Employer, fearful of receiving claims for delay from the Contractor if he is late in producing his part of the design, often releases drawings before they are fully completed. To put this another way, the Employer's design tends to be

issued by the due date required by the contract irrespective of the level of development achieved.

The Contractor then attempts to complete the design and carry out the engineering relating to his chosen construction methods, only to find that this has become a much more expensive and time consuming exercise than he had originally thought. It is not until the Contractor becomes involved in detail in attempting to complete the design, that he is able to see the Employer's design has been released prematurely.

On most occasions of this nature the Contractor will persist in completing the design instead of returning it to the Employer mainly because he wishes to avoid delay. Nevertheless, the consequences are usually painful and normally result in disruption to the actual construction as the design period is extended. The end result is usually a large claim from the Contractor which greatly exceeds the value of that which would otherwise have arisen if the Employer had waited until his design had reached the necessary level of development. However, any inadequacy in the definition of each party's design obligation to the other, will usually result in widespread doubt as to how to react in situations where things have gone wrong in the ways I have outlined.

Whose Design is it Anyway?

A recent example of the disastrous consequences of not properly addressing this difficult question arose in the case of *Davy Offshore-v-Emerald Field Contracting (1991) 55 BLR 22*. The Official Referee considered a series of preliminary issues arising out of a contract for the design and construction of a floating production and storage facility required for the development of an oil field in the North Sea. The judgement is lengthy and complex and is a promising basis for a whole series of articles in its own right. Amongst other things Davy argued that the contract was only partly a design and construct contract since Emerald had developed the basic design and had retained exclusive control of it.

If a change in this basic design became necessary then this could only be achieved by Emerald ordering a variation and thereby allowing Davy an increase in the lump sum price.

The contract was not based on one of the standard forms (and led to a valuable analysis by the court). The outcome should be approached with caution since the actual wording of the contract inevitably produced questions which were peculiar to it. Nevertheless it provides an object lesson on the construction of this kind of agreement. The judge relied upon *Antaios Compania Naviera SA-v-Salen Rederierna (1985 IAC 191)* when Lord Diplock said:

"I take this opportunity of restating that if detailed semantic and syntactical analysis of words in a commercial contract is going to lead to a conclusion that flouts business commonsense, it must be made to yield to business commonsense".

The judge accepted Emerald's argument that Davy were not only responsible for the whole of the design including the basic design but had also undertaken to correct all deficiencies in it. Relying upon *The Antaios* His Honour Judge Thyne Forbes QC said:

"I see no justification for distinguishing between responsibility for the 'basic design' provided by Emerald and responsibility for the remaining design that has to be done in order to complete the work required by the contract. In my judgement, the contract draws no such distinction. For the reasons which I have given, I am satisfied that under the terms of the contract, Davy assumed responsibility and risk (except in very limited circumstances) for the whole of the design, including the 'basic design' which had been provided by Emerald".

In principle, there is no reason why contracting parties should not agree to divide responsibility for design between them. The problems of properly and accurately representing this agreement with the required precision are, however, immense and are very often overlooked. It must also be said that the Contractor is often hostile to the concept of sharing

the design but has it imposed upon him by the Employer for largely commercial reasons. Technically, it is probably preferable for the design to be done by one side (does it matter which?) and the trend towards dividing the responsibility appears to happen in spite of this.

Preferential Engineering - When Things Get Really Confusing!

The designer, irrespective of whom he represents, has a number of options available to him and it is an important part of the design function for the correct decisions to be made progressively so that the completed design is consistent.

It is normally preferable to have the design undertaken by one entity. I suggest this is best done by the professional consultant in the majority of cases. The consultant should produce a design which complies with the Employer's instructions but which takes careful account of the legal responsibilities stated in Mr. Duncan Wallace's definition given in Part I. For quite understandable reasons the consultant designer will tend to err on the right side making sure particularly that durability, quality, structural soundness and safety are not compromised. The design should benefit from the cohesion to be obtained from being carried out under one roof.

From a strictly practical point of view it seems to me that only when the technology involved is highly specialised and where a relatively small number of contractors have specialised in it, can it be realistic that the Contractor be entrusted with the design. In making this statement I do not include commercial considerations of time and cost and it is mainly these which dictate the decision as to whether or not the Contractor should be involved with the design.

In many cases however whilst these commercial influences have decided the design strategy, a technical contradiction can be created when the Employer's expertise in the relevant technology is superior or equal to that possessed by the Contractor. The Employer, often controlling large numbers of creative designers, seeks to impose design responsibility upon the Contractor following one of the methods outlined earlier or a variation of these.

During the design phase of the proceedings, the Contractor is faced with the unenviable task of gaining approval of his detailed interpretation of the requirements of the Contract by people who are quite often more experienced in the technology than he is! In addition, the Employer's technical representatives may not be particularly concerned regarding the amount of time which the Contractor has set aside for the completion of the design.

In such circumstances, particularly where there may already be some doubt in the minds of the individuals concerned as to the relative duties of their employers, preferences are often expressed and insisted upon by the Employer's representatives. On large projects this subjective reaction to proposals put forward by the Contractor can become extremely expensive both in terms of time and cost. However the process is insidious and as a consequence it is often difficult to identify precisely what is taking place until it is too late.

The unhappy outcome (for everyone except lawyers and claims consultants) is frequently a "running battle" between respective engineering staffs brought about by the Employer's people attempting to impose the best quality they can achieve on the one hand whilst on the other the Contractor tries to complete the design and gain approval of it as quickly as he can. Inevitably this results in a most unsatisfactory state of affairs and usually creates delay to construction or causes disruption arising from the prolongation of the design process and its subsequent encroachment into the construction period. The complexity of some of the claims made by Contractors whose work is affected by this very common syndrome has to be seen to be believed!

This problem is caused mainly by insufficient definition of the respective duties and obligations of the parties. If the satisfactory completion of a design by the Contractor depends upon a constant and regular dialogue between dozens of design engineers on either side then it has to be said that something has gone wrong. Was the relationship properly defined in the first place? Was the design capable of being completed by the Contractor in any event

or was it the Employer's real intention to simply use the Contractor's design team as an extension of his own?

Employers might bear in mind that in situations where the Contractor has complete or partial design responsibility, he may compromise himself if his representatives or independent consultants act in any way other than inspectors. He should avoid affording authority to intervene or interfere with the duties of design and administration owed to him by the Contractor. If such interference does occur, liabilities may become confused and the Employer's enforcement of remedies against the Contractor may be hindered by the operation of doctrines of law such as waiver or estoppel. This may be a useful argument to use when you are next confronted with unbridled preferential engineering!

The Solution

It is plainly unrealistic to propose that the best solution to the difficulties outlined in this article is to avoid sharing or dividing design responsibility in the first place. The industry generally is much too complex and the traditional lines of demarcation between the design and construction processes have long since become less certain. It seems to me however that in too many instances the deciding factor which introduces divided design is one of so called commercial expediency rather than the pursuit of technical excellence. All too often this hoped for commercial advantage is a false premise since the technical "balance" was never achievable. Consequently the advantages to be gained by involving the Contractor in the design are frequently eroded by a combination of inadequate contractual definition and inept practical application of agreed procedures.

There are tremendous benefits to be obtained by utilising the Contractor's technical expertise in many instances but the emphasis should be placed on this rather than the commercial advantage which the Employer might hope to gain by attempting to oblige the Contractor to assume the risk for a badly conceived or flawed initial "core" design. This must be coupled with a much better definition of respective contractual obligations which cannot usually be achieved by reliance upon a modified version of one of the standard forms of Contract.