

MANAGING DISPUTES IN MAJOR PROJECTS

*John G Walton**

The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man.

George Bernard Shaw *Maxims for Revolutionists* (1903) 24

I INTRODUCTION

As a colleague once observed, albeit tongue in cheek, "the last thing we want is for peace and harmony to break out in the World!"

Joking aside, as advisers and private dispute resolution practitioners, it is easy to forget that the parties to disputes – those who actually have a vested interest in the outcome, and who pay our bills – are very rarely in the business of dispute resolution. They have businesses they wish to run, and disputes are generally costly distractions to those businesses. I would venture to add that the cost, uncertainty and delay in traditional litigation (and sometimes arbitration, for that matter) is unwelcome in a way that commercial advice geared to project delivery is not.

I say this as a former partner in a large national legal practice where repeat instructions were the norm in the commercial team; less so for the litigation team. I mean no criticism of my former common law partners when I say this. But we do need to recognise that litigation is not generally an experience that people in business wish to repeat.

I should also add that common lawyers tend to view disputes as one-off transactions (if I can sound commercial for a moment), and their interests tend more to the intricacies of the law than clients' business interests; as the chair of one of the major firms observed to me recently, litigators see their strongest relationships as being with the courts, rather than with clients.

It is my proposition that successful project outcomes are more likely if the procurement process engenders trust and the disputes process is geared to the early

* LLM, FAMINZ, FCIArb.

identification of potential disputes, and dealing with them in a way which does not distract from project objectives. This may require a level of flexibility by the parties they are not accustomed to, but it is often the only option they have if they wish to continue with the project.

We often hear at events such as these, that it is better to go to mediation only once the dispute has crystallised or after discovery has been completed and the strengths and weaknesses of the parties' respective cases understood. That's good advice, I'm sure; in fact I've probably given that advice myself on more than one occasion over the years.

We are, however, being myopic when we say this. Our concern is over providing a successful outcome from the litigation process, proving the facts and resolving the dispute at hand, rather than the wider context of the parties' business interests, and their relationships with the other disputants and the wider business community which they inhabit.

It would be a mistake to take my comments as an invitation to walk away from egregious behaviour (breaches of contract or failure to meet standards) – sometimes parties need a bit of stiffening of resolve and encouragement to exercise their legal remedies with a bit of enthusiasm and confidence. Far be it for me as a disputes practitioner to discourage a nice lengthy arbitration on complex issues.

But, for major projects where parties engage in a long term procurement, or other processes where relationships are important, legal advisers and we, as professionals engaged in private dispute resolution, need to take a significantly different approach.

In this paper, I will look at the procurement strategies available for major projects; various approaches to allocation of risk, and what I call a sensible allocation; pro-active contract management; dispute resolution procedures, and how to stop disputes from escalating; and how to promote successful project delivery. All aimed squarely at dispute avoidance and project delivery.

I will draw on practices in the fields of technology, engineering and construction, primarily as those fields have the most highly developed contracts and procedures, but my comments apply equally to any other commercial arrangement which involves a long term relationship.¹

1 This paper draws on material put together for a paper I jointly prepared with John Bellhouse of 9 Gray's Inn Square, London for the International Society of Construction Law conference in Melbourne in May 2012.

II PROCUREMENT STRATEGIES FOR MAJOR PROJECTS

Major international projects are commonly carried out by substantial, experienced international contractors either alone or in joint venture. However, the owner may on the one hand be a sophisticated entity used to commissioning and managing very substantial projects, or on the other, may be inexperienced in complex procurement – it may be a once in a lifetime experience.

It should also be acknowledged that it is not uncommon (particularly in a developing countries, though they are not alone) for a government or other public sector owner to want to transfer as much risk as possible to the contractor even though that may drive up the price of the work, without adding to the likelihood of project success.²

Historically, risk allocation was reasonably harsh and the cost of dealing with any risk, unanticipated or otherwise, was simply priced into the project. Much of the infrastructure developed during the 19th century was designed and constructed with little regard for price certainty or timely delivery. It was only in the 20th century that the standard forms, developed by the Royal Institution of British Architects (RIBA), Institution of Civil Engineers (ICE) & the International Federation of Consulting Engineers (FIDIC), really tried to bring certainty to cost and completion.

Under the traditional construction model, the design was prepared by the employer's consultant to a stage where a fixed price could be tendered, and events giving rise to additional time and payment were dealt with in the contract. Any concern which contractors may have had about contract administration were balanced (in theory at least) by the independent and impartial Engineer/Architect undertaking a dual role as employer's agent, and independent certifier and disputes resolver.

The traditional role of the Engineer/Architect can be summarised as follows:

- carry out site investigation and project feasibility,
- prepare concept design and costing,
- draft tender documentation, including plans, specifications and contract documentations, and call tenders,
- make recommendation over contract award,
- prepare detailed designs,

² The New Zealand Government's pro forma public-private-partnership model developed for the Wiri Men's Prison and for the building of new schools in 2011 is a case in point.

- administer the construction contract as employer's agent, including fulfilling the dual role of Engineer/Architect under the construction contract and determining disputes on an interim basis under the disputes resolution clause, and
- arguably, ensuring delivery of the project to the quality required, on time and within budget.³

While this approach enjoyed considerable success for some time, it was not without its problems:

- (1) The contested tender process encouraged contractors to be aggressive in their pricing, often cutting margins in the hope they would be able to recover bid costs and lost margin through claims after award.
- (2) Over time, bid costs increased, imposing a considerable financial burden across the construction industry.
- (3) The tender process set in place an adversarial relationship based on distrust between employers and contractors, which often carried over after award.
- (4) Tender designs were frequently incomplete, resulting in costly variations.
- (5) The independent Engineer/Architect, as designer and administrator, was frequently far from independent when it came to determining issues like variation claims, which have the potential to impact on their own liability.⁴

That has led to a reasonably widespread reconsideration of the traditional procurement models.⁵

When considering risk management more generally, it is also important to recognise that the parties themselves often have a different perspective to risk. For experienced and competent employers (like the Hong Kong Government in the examples below or utility providers like energy and water companies in developed economies), assessing, recording, allocating and managing risk is something they are relatively comfortable with.

3 See Hudson's Building and Civil Engineering Contracts.

4 For a recent discussion of the role of the Engineer, see my paper 'Interim Determinations – Time is up for the Independent Engineer' (paper presented at the AMINZ Breakfast, Auckland, 11 May 2010) <www.johnwalton.co.nz/publications.html>.

5 See (for example) Sir Michael Latham, *Constructing the Team - Final Report of the Government/industry Review of Procurement and Contractual Arrangements in the United Kingdom Construction Industry* (Department of the Environment, 1994) for a discussion of the failings of the traditional contracting approach.

Conversely, in developing economies, and where there are other challenges to project delivery, there can be considerable (often political) appeal to paying a premium for transferring all risk to the contractor, and procuring a greater level of price certainty. This approach is not without its risks, as there is no certainty about how the contractor has priced for the risk, or will manage it if it eventuates, but it has an undeniable appeal.

The difficulty is that tender processes provide opportunities for owners to try to gain advantage by transferring risk – not because it is a good idea, but because they can. Any such gains are an illusion as:

- (i) the tenderers will price in a premium for taking on such a risk
- (ii) if the risk cannot be priced and managed properly, such a premium is wasted expenditure
- (iii) post award, if the risk eventuates, the contractor will claim anyway – if not under this head then under another

As they say in other contexts, there's no such thing as a free lunch.

These approaches also assume a hard letter, lump sum fixed price approach to contracting where the contractor and Architect/Engineer pit their wits against each other – one to maintain the price and delivery agreed at award, and the other to maintain its margin and to recoup some of its losses given away to win the work.

The Role of Good Faith

The most recent and it has to be said most widespread alternative contracting approach⁶ has been the use of the Engineering and Construction Contract (NEC3), issued by the Institution of Civil Engineers in response to the Latham report.⁷

The NEC3 introduces an entirely new language and approach to contracting. The contract adopts an approach near to the civil law concept of "good faith"⁸ together with procedures for the maintenance of a project risk register, risk

6 Notably, NEC3 has been accepted as a form of contract for all PPP projects in the UK, and for the development of facilities for the 2012 Olympics in London.

7 See Sir Michael Latham's report above n 5.

8 See cl10.1 in all NEC3 forms, which imposes an express obligation to act in a spirit of mutual trust and co-operation. For a discussion of the duty of good faith see John Bellhouse and Paul Cowan, 'The Application of Civil Law in the Context of International Construction Contracts', (paper presented at the Fourth International Construction Law Conference, Melbourne 2012).

meetings and early warning,⁹ all independent of the claims process (styled compensation events).

This form of contract provides a happy medium, by allowing for some hard letter contracting, with a more co-operative overlay.

Like all standard form contracts, it does tend to assume that all risks in the project can be handled in the same way. For more complex projects, this is usually far from the case. For example, in a current infrastructure project in New Zealand, the owner has adopted an NEC3 approach, but with a combination of different pricing approaches for different activities which would be best described as a mix of fixed price, target price and measure and value. That approach has been greeted positively by the contractor, as it is seen as showing an understanding of the complex risks in the project. The contractor is also being treated fairly for uncertainty. Time will tell if this approach is successful; the project is not due for completion until 2015, but so far the relationship has been positive.¹⁰

No standard contract is going to work for every major project; at least, not without some adjustment.

III SENSIBLE ALLOCATION OF RISK

When the representative of the Highways Department of the Government of Hong Kong announced that no extensions of time or additional cost would be granted for weather events, you could hear a pin drop. The surprise of the legal team representing the Government in the construction of the Tsing Ma Bridge – to be the longest suspension bridge in the World at that time (early 1990's) – was tangible, as we considered the consequences of such a significant transfer of risk.

The response of the international contractors was less measured.

The Tsing Ma Bridge was to have a span (between towers) of 1.3 km. It was employer designed, and was to be the iconic element of the new Lantau Fixed Crossing, linking the city of Hong Kong to its new airport at Chek Lap Kok. The bridge was an ambitious project, costing in excess of HKD 4 billion, and taking over 4 years to build.

Many of the allocations of risk for the Hong Kong airport associated projects were aggressive, but transferring the risk of delay and additional cost for weather events in typhoon-prone Hong Kong was (initially) breathtaking.

9 See cl 16 of the Engineering and Construction Contract.

10 An interesting aside to that project is that the employer is controlling the supply chain by contracting directly for all critical supplies using the NEC3 Supply Contract.

The discussion which followed was instructive. While no one could say with any certainty when a typhoon would strike the Territory, how long it would last, and how bad it would be, there were some certainties.

Statistically, we knew when typhoons were most likely to strike, and when the bad ones were most prevalent. Furthermore, the programme for the work, and the construction method statement were under the control of the contractor, making the contractor the party better able to manage the risk. In that context, it would be a bold contractor who programmed the lifting of the 40 metre deck sections (complete with a 6 lane top deck, and rail and all weather lanes underneath) onto the hangers during the typhoon season.

From a risk allocation perspective, what looked aggressive developed a certain logic. The allocation was ultimately modified to allow for an extension of time for the periods during which Signals 8 and 10¹¹ were hoisted, but in practical terms the obligation to manage the project in such a way as to minimise the effects of weather events remained with the contractor.

The lesson to be learned from this approach is not that we should be more aggressive with transferring risk, but that risk is specific to the project, its location and the availability of information, and should be analysed and allocated on a case by case basis.

A What is Risk?

It is my view that for any project, there must first be an assessment of what information is available, and how best to come to an informed view of the likely risks, the likelihood the risk will be encountered and the mayhem they will create if the do eventuate.

That should then be recorded in a baseline or natural condition report and they should also noted in the risk register for the project, which both parties review and agree (and in the case of the risk register, modify as the project progresses). The contractor then prices for dealing with those conditions.

Construction projects are complex, expensive and typically take time to complete; even completion can be a variable outcome. Typically, contractors are therefore asked to price making certain assumptions; the contracts we draft must then legislate for those uncertainties (what former Secretary of Defence, Donald

11 The Hong Kong typhoon warning signals that indicate a serious typhoon is imminent; signal 8 advises that a typhoon is approaching the Territory, and that people should go home; and signal 10 indicates a direct hit on the Territory, with all businesses, including transport, closed.

Rumsfeld rather clumsily referred to as known unknowns and unknown unknowns).

Those uncertainties are then dealt with by the contractor and paid for by the employer; either as part of the price agreed during the tender process, or by additional payment and allowance for delay.

It is not that these risks are unlikely, improbable, unforeseeable,¹² or that they have such a small chance of occurring that it would have been unreasonable to have allowed for it.¹³ Nor is it a case where a general determination by the Engineer as to what is fair is appropriate.¹⁴ These vague and rather general concepts, while perhaps uncontroversial, are not especially helpful, and give rise to considerable disagreement when it comes to applying them as they ultimately rely on an objective assessment of a mythical experienced contractor.

It is my view that a more productive approach is to assess the extent of uncertainty,¹⁵ to then determine a baseline of likely conditions the contractor is to encounter, against which the contractor prices its bid. If the contractor encounters nothing outside the original baseline, then it is fair to say that the preliminary investigations were probably worthwhile and no claim is likely to be sustained. If an event is encountered which is outside that agreed baseline, and if the contractor had relied on that baseline (or had actually taken a more conservative approach), and cost or delay had actually been incurred,¹⁶ any entitlements should be relatively uncontroversial.¹⁷

Much like the issue of weather in the Hong Kong project referred to above, risk has a considerable element of subjectivity to it; varying from project to project, and

12 See cl 1.1.6.8 of the FIDIC Red Book – "not reasonably foreseeable by an experienced contractor by the date for submission of the Tender".

13 See cl 60.1(19) of the NEC3 Engineering and Construction Contract.

14 See cl 10.3.1 of the Conditions of Contract for Building and Civil Engineering Construction (NZS3910:2003).

15 It can be argued that there are two types of uncertainty – specifically that where the uncertainty is measurable, it is not in effect an uncertainty at all – which have a bearing on how the risk of one or the other should be managed. If the uncertainty can be measured, it can then be allocated more easily and priced accordingly. See John Powell, 'Professional Liability and Construction: Risk Retained and Risk Transformed' (Paper presented to the Society of Construction Law, London, 1 December 2009) <www.scl.org.uk/professional-liability-and-construction-risk-retained-and-risk-transferred>.

16 This is the approach favoured by the International Tunnelling Insurance Group, Code of Practice for Risk Management of Tunnel Works (30 January 2006).

17 Subject to any overriding obligation on the contractor to mitigate delay and/or cost, and at whose expense.

circumstance to circumstance. But it does have the common element of uncertainty; uncertainty of severity and outcome, if not of occurrence. Returning to the words of the former US Secretary for Defence, it is not that the occurrence of the event (known or unknown) was unforeseen, but that the consequences for the project of the event occurring are typically not included in the pricing or the programme.

B How should Risk be Allocated?

In every negotiation in the construction industry, someone will voice the truism – risk should be allocated to the party best able to manage it – or some variant of it. While undoubtedly true, it does rather beg the question of how risk can be managed, particularly those risks where neither party has a greater ability to control it.

Similarly, we hear from time to time that risk is owned by one party or the other. Such shorthand can also obscure certain fundamental realities in the discussion of risk. In any construction project, the employer or owner pays for the project, one way or the other. The most uncertain issues are what the price will be and when the owner gets the benefit of the completed project.

For the formation of the Hong Kong airport platform, involving the levelling of two islands and the reclamation of 9.38 km² of the seabed, the decision of the Government to pass all ground condition risk to the contractor was also, on its face, aggressive. What can be said, however, is that the Government of Hong Kong is experienced in major capital projects, and knows and understands the environment in which it carries out those projects. In Hong Kong there is also significant knowledge, information and experience in relation to ground conditions which is known to contractors. Although the ground condition risk may be said to be owned by the Government, in the context of this project and the information available, it was more easily managed or controlled by the contractor.

Consequently, to talk in that context of ownership is misleading. The issue is really whether or not the contractor priced, or should have priced, for the risk in its bid; and whether or not the employer is to be required to pay more, and if the imposition of liquidated damages is to be deferred to give the contractor more time to complete the works. No one owns the risk, although one party may have more ability to manage or control it.

Where a risk can be identified and the cost of avoiding that risk, or managing its effects, can be reasonably assessed at the time of tender, then it is sensible to allocate that risk in the contract. As with the Hong Kong Airport project, where considerable data was available and tenderers were given the opportunity to carry

out further investigations, international experience has shown that time spent understanding the levels of uncertainty prior to tender and adopting an informed approach to risk is critical to overall project success.¹⁸

The alternative approach of simply pricing the work based on the design, and the protection offered by the allocations of risk and claims procedures in the standard forms of contract can be less rewarding, not least because almost all standard form contracts represent a compromise approach to risk negotiated between construction industry groups with different interests.

Some employers and contractors fail to understand that a standard form contains an existing allocation of risk that may not be appropriate to any particular project or they assume that the standard allocation is appropriate for their project without proper analysis.

Any allocation of risk must start with a careful assessment of uncertainty, followed by understanding the extent of that uncertainty and a consideration of how it might be reduced. Once those uncertainties have been understood, and recorded in a baseline condition for pricing, managing any such risk and the consequences of the risk eventuating are then matters to be covered in the contract procedures.

IV PROACTIVE CONTRACT MANAGEMENT

Contracting is all about risk management first as a matter of appropriate and sensible allocation of risk and then as a matter of how the risk is managed by the party to whom it is allocated.

In the ideal scenario, the employer undertakes an investigation of risk, typically through a risk workshop, prior to inviting tenders. This forms the basis for the baseline condition. The tenderers are then invited to comment on the risk register, and the reasonableness of the baseline condition. Provided tenderers are satisfied that they will be fairly compensated, they will comment productively on these documents. This was the approach taken with some success for the undergrounding of the Hobson Bay sewer in Auckland.

Following award, the risk register is kept up to date, and risks are notified through the early warning system. This does not assure compensation.

That is a separate process. Sophisticated risk management approaches do require experienced project management teams for both parties.

18 For an Australian perspective, see Bill Smith, 'Scope for Improvement – A Survey of Pressure Points in Australian Construction and Infrastructure Projects' [2007] *International Construction Law Review* 24, 36.

Sharing the Cost of Risk

There is little point in simply sharing the liability for risk as this blurs the lines of responsibility. However, if a risk which is allocated to a contractor, (e.g., the risk of adverse ground conditions) does not occur it is possible, assuming the contract pricing is on an open book basis, for the employer and contractor to share the saving made by the contractor against the amount in his price for this risk. Equally, if the risk does occur the contractor can bear the cost up to an agreed figure and if the cost is greater then employer and contractor can share the overrun. This concept was utilised by one bidder for a light rail project in Trinidad, although the project did not proceed beyond the first phase.

This is also common in alliance and other contracts (including in the NEC3 contracts) using a painshare/gainshare approach. Generally, these approaches only work where there is proper and rigorous control over changes to the Final Outturn Cost, and where uncertainty is reduced as the Actual Final Outturn Cost becomes more certain.

For the parties to share the financial consequences of risk can be very productive. But it is no panacea for an appropriate allocation of risk in the first place.

V MULTI-TIER DISPUTE RESOLUTION PROCEDURES

Over the last two decades, at least, the issue of how to resolve disputes under international construction contracts in a relatively quick, fair and inexpensive timeframe has become a very significant issue. The risk of long running disputes, both during and after the completion of the work, is a matter of concern both for employers and contractors.

Many of the international forms of contract, such as the FIDIC suite of contracts, are based on English drafts primarily underpinned by common law concepts. One of the principles utilised in these forms of contract was the role of the Engineer/Architect in taking the initial decisions on disputes.

Originally, the engineer under the FIDIC form of contract (initially the Red Book) was a powerful entity who was able to take decisions frequently without fear or favour between the employer and contractor. An international contractor was able, in these situations, to rely (mostly) on the fact that the engineer, although appointed by the employer, would act fairly and independently and that he would get an initial decision in relation to a claim or dispute which, even if he did not like the decision, he would normally be able to recognise as being fair and reasonable.

Over the years, the role of the third party powerful engineer has been diluted and the ability of even an independent engineer to act without interference by an

employer has been reduced. In many cases the engineer is now an employee of the owner or another government entity who cannot be relied on to take an independent position. This is now reflected in the FIDIC contracts,¹⁹ and in the ICE Conditions of Contract 7th Edition,²⁰ which requires the owner to set out in the contract any restrictions which are placed upon the ability of the engineer to take independent decisions without the approval of the employer. These restrictions frequently require that the engineer cannot grant an extension of time or extra payment to a contractor without the approval of the employer; notwithstanding the common law concept of a fair and independent decision by the engineer when deciding upon an extension of time.

A second reason why the resolution of disputes has become a significant risk issue relates to the cost and time of international arbitration. International arbitration has always been and continues to be the ultimate method of dispute resolution under an international cross border construction contract. However, what started in the UK as the cheaper, quicker alternative to court litigation has now become, in any many cases, more expensive and more time consuming than obtaining a decision in, for example, the UK Commercial Court or the Technology and Construction Court.²¹ However, arbitration remains the only sensible ultimate dispute resolution mechanism in a cross border project contract.

A third factor driving the need for improved dispute resolution mechanisms has been the risks inherent in mega projects such as the Channel Tunnel (1980s) and the Hong Kong Airport and associated projects (1990s).²² Such complex and costly projects needed and developed multi-tier dispute resolution mechanisms to manage the risks inherent in disputes. IN the case of the Hong Kong Airport project, the dispute resolution procedures included adjudication for disputes over payment, mediation and the arbitration.

As a consequence of these and other complex projects, there has been an increasing pressure to develop cheaper, quicker forms of interim dispute resolution in international construction contracts. To a large degree this has been reflected in the UK, Australian and New Zealand schemes of statutory adjudication in domestic

19 See cl 3.1 of the FIDIC Red Book.

20 See cl 2(1)(b).

21 With the potential in NZ for more specialization on the bench, this is a position to watch.

22 The author was a member of the legal team advising the Hong Kong Government on the airport associated projects, led by John Bellhouse who was also a member of the legal team that advised the employer in relation to the Channel Tunnel construction contract.

contracts and the increasing use of contract dispute boards, mediation and contractual adjudication.²³

There are a number of forms of interim dispute resolution that are commonly utilised. These include: dispute boards, expert determination, adjudication and project mediation. Pre-arbitral dispute resolution steps fall into two categories. The first is consensual – amicable settlement; mediation; and dispute review boards (DRB) (although it can be argued that a DRB is a separate category of its own); and the second is determinative - adjudication; expert determination and dispute adjudication boards (DAB).

In all cases, in the absence of a final settlement or final third party decision, the ultimate dispute resolution provision is arbitration or in some cases court proceedings.

It is worth spending a little time on dispute boards as their use in NZ is growing.²⁴

Dispute boards (DBs), fall into three types: DRBs, DABs and the combined dispute board (CDB) promoted by the International Chamber of Commerce (ICC).

The key difference is that a DRB makes a recommendation to the parties in relation to a particular dispute whereas under the DAB, the dispute board will make a decision which is binding on the parties unless and until overturned in arbitration. That decision is enforceable under the contract and failure to comply with the decision would constitute a breach of contract.²⁵ The CDB is, as its name implies, a halfway house where the parties can decide whether the dispute board decision is to be a recommendation or a decision.

DRBs are prevalent in the USA whereas DABs occur more frequently outside the USA for example under the FIDIC forms of contract.²⁶

Although dispute boards can be established on an ad hoc basis, they are commonly set up at the beginning of the contract and on major projects there are usually three members. Throughout the life of the project they will pay regular visits to the site and be updated by the parties on progress and any issues that are

23 The New Zealand Dispute Resolution Centre has developed a set of protocols and procedures for commercial adjudication, based on statutory adjudication in the Construction Contracts Act 2002.

24 Most recently in Transpower's upgrade of the Cook Strait High Voltage DC cable.

25 In this connection, see Christopher Seppala, 'Enforcement by an arbitral award of a binding but not final engineer's or DAB's decision under the FIDIC conditions' (2009) ICLR 26(4).

26 See, eg, cls 20.2 to 20.4 of FIDIC Red Book.

arising. They will have informal discussions with the parties and in many cases are able, through those discussions, to help the parties informally resolve issues.

From a contractor's point of view, the increasing use of dispute boards is an attractive feature in the context of the decline in the independence of the engineer and the expense and delay involved in arbitration. In addition, a contractor is usually reluctant to embark upon an arbitration during the course of the works (unless there is a very significant issue that needs to be resolved) because that will disrupt his concentration on carrying out the works and may also sour relations with the employer irretrievably.

On the other hand, a DB where the members become known to both employer and contractor and with whom they have regular discussions and who can help them resolve a dispute either in informal discussion or by way of recommendation or decision is valuable from a contractor's point of view. He will achieve a result reasonably quickly during the course of the contract and even if he does not obtain a wholly favourable result he may be willing to accept the outcome and move on without resort to arbitration.²⁷

The fact is that most disputes under international construction contracts relate to claims by contractors for more time and/or money arising from third party events (e.g., bad weather; adverse ground conditions) or the actions of the employer. Consequently it is not surprising if contractors consider that dispute boards are a method by which a contractor can manage the risk of such claims arising. But, in my opinion, DBs are also a useful mechanism for the employer in managing disputes at an early stage at a lower cost than utilising arbitration.

Dispute boards in both forms have been in use for enough time now for various studies to have been carried out as to their effectiveness.

A The Impact of Dispute Boards

The key test of the efficacy of any dispute resolution and management mechanism is whether it benefits the stakeholders, that is the parties to the contract.

The two obvious benchmarks against which to measure the impact of dispute boards are:

- (1) Have dispute boards successfully reduced the number of disputes which proceed to arbitration or court?

²⁷ Project mediation, as offered in the UK by CEDR Solve addresses some of these issues. A NZ version of the Project Mediation Protocol is available for download from <www.johnwalton.co.nz/projectmediation.html>.

- (2) Does the inclusion of a dispute board in a contract mean that tender prices are less than when there is no dispute board included in a contract?

In a paper published in 2009 (but first prepared in 2008) Kathleen Harman studied the impact of the dispute review board process in the Boston Central Artery Tunnel (CAT) Project (the Big Dig).²⁸

The Big Dig commenced in 1991 and reached substantial completion in December 2005. It was \$12 billion over the original budget and seven years late.

Not all the Big Dig contracts made provision for a DRB but in those that did, the DRB made a recommendation which was then referred to the owner's project director who would accept or reject all or part of the recommendation. If the contractor disagreed with the project director's decision it was entitled to appeal such a decision to the Massachusetts Highway Division Board of Contract Appeals or file an action in the Superior Court.

There were 86 separate construction contracts of which 46 had DRBs and 40 did not. Because of this, it is possible to measure on the same project the impact of DRBs on contracts against contracts which did not have DRBs.

In relation to the questions above:

Were DRBs successful in reducing disputes that went to court (in this case)?

Harman found:

Essentially, although the majority of issues were resolved on the entire project, \$57 million (1375) claims/disputes were left unresolved at the entire project's substantial completion. Moreover, a greater percentage of DRB contracts as opposed to non-DRB contracts had unresolved claims/disputes.

There was a low level of presentation of claims/disputes to the DRBs which may have been due to the fact that there were significant partnering efforts between the employer and contractors during the project and the majority of disputes, change orders and claims were resolved by other means. Harman says several factors appear to have influenced the owner as well as the contractors to ignore the benefits of the DRB process. These were:

- Elongated dispute resolution process;
- DRB process viewed as adversarial;

28 Kathleen M J Harman, 'Case study as to the Effectiveness of Dispute Review Boards on the Central Artery / Tunnel Project' (2009) 1(1) *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction* 18.

- Preparation for the hearing was time consuming;
- Issues with the DRB recommendations being unconvincing; and
- Recommended settlement amounts below the historical average.

In short, the DRB process as used on the Big Dig seems to have been procedurally too complex (nearer to arbitration processes than it should have been) and did not enjoy the confidence of the parties to the process.

As a result of the lack of take-up of the formal DRB process, the parties instituted an advisory DRB process to which we refer below.

In Florida the use of DRBs by the Florida Department of Transportation (FDOT) has been positive. The FDOT has used 460 DRBs between 1994 and 2009.²⁹

- DRB cost per project – 0.39% of project cost.
- DRB recommendations accepted by both parties – 84%.³⁰
- Compared with non DRB contracts DRBs save more than 5% in cost overrun and 17% in time overrun.
- Significant reduction in subsequent litigation/arbitration.

Did the use of a DRB in a contract create bid savings?

Harman finds that the average bid saving for DRB contracts was 13.4% against the engineer's original estimates but that the average bid saving on the non-DRB contracts was 12.25%. Consequently, having a DRB provision did not appear to significantly influence contractors to submit a lower bid price than they would have submitted had the provision not been included in the contract documents.

Harman suggests that the experience with the DRBs on the Big Dig and the timing of when issues can be brought to hearing was in sharp contrast to the Corps of Engineers' (COE) use of DRBs. The COE process allowed factual disputes to be resolved at the contracting officer level and a DRB hearing was held earlier. This use of DRBs was shown to reduce delays, claims and cost overruns.

29 Ralph Ellis, 'Success of DRBs in Florida' (Paper presented at the Dispute Resolution Board Foundation 14th Annual Conference, Charleston USA, October 1-3 2010) <www.drb.org>.

30 In the article by Kurt Dettman and Christopher Miers 'Dispute Review Boards and Dispute Adjudication Boards: Comparison and Commentary' (2012) 16(1) Dispute Resolution Board Foundation Forum, it is stated at footnote 8 "...for example, owners who are major users of DRBs on road contracts have stated they follow approximately 75% of recommendations."

The experience in Australia of DBs also appears to be positive. In a paper prepared for the 2011 IBA Annual Conference, Professor Doug Jones AM looks at the experience in Australia.³¹

Professor Jones indicates that DRBs have been used in 21 projects between 1987 and mid-2010.³² Professor Jones states:³³

In summary, the Australian construction industry has been comparatively slow to embrace the use of DRBs as a dispute resolution method. However, they are starting to be used more commonly. Importantly, the international success of DRBs has been mirrored in Australia. Empirical evidence has been shown that in each instance of their Australian use, no dispute progressed to arbitration or litigation.

The experience in New Zealand is similar. DRBs were put in place for the Manapouri Tail Race project, and for the upgrade of Pole 2 for the Cook Strait HVDC Cable project. The DRB in the first project resolved considerable disagreement about ground condition variations; the second project is ongoing. There have been a number of other projects where DRBs were contracted for, but the nominated members of the DRB were never appointed.

It is fair to say that in New Zealand, adjudication has supplanted both the interim determination of the Engineer/Architect and arbitration. The failure of DRBs to be appointed almost certainly stems from the view that they are an added expense in an industry where project managers generally back themselves as being good negotiators.

B Informal Resolution of Disputes by Dispute Boards

For the Manapouri project, I understand reasonably formal hearings were held, but legal representation was not allowed (which caused some frustration).

As indicated above, on the Big Dig the parties instituted an advisory DRB process under which the documentation was not as elaborate, oral testimony was abbreviated and the DRB rendered an oral opinion after an informal presentation. There were 30 advisory hearings which were held on issues ranging from \$100,000

31 Doug Jones, 'Dispute Boards: the Australian experience' (Paper presented at the International Construction Project Session International Bar Association Annual Conference, Dubai, 30 October-4 November 2011).

32 DRBA database, Dispute Resolution Board Australasia <<http://www.drba.com.au>>.

33 Ron Finley, 'Dispute Resolution Boards on Major Infrastructure Projects – Where and When Would You Use Them?' (Statistics presented at Dispute Resolution Board Seminar, Clayton Utz Sydney, 31 May 2011).

to \$10 million. All the issues brought forward for advisory opinions were settled and contract modifications were issued.

The institution of this advisory process is described by Bryson S Shipley in a paper entitled "Expanding the DRB's Role".³⁴

Shipley indicates that on the one hand the low number of disputes submitted to the DRBs as at 1999 (the project was not substantially complete until 2005) was due to the success of partnering in resolving the bulk of the issues that have arisen but there was concern that there was a growing backlog of unresolved disputes. Accordingly, the parties began to develop an "Advisory DRB Initiative" reflecting a positive experience of the University of Washington in using DRBs to render early, informal, advisory opinions.

This initiative, according to Shipley, offered an opportunity to take greater advantage of the experience and expertise of the DRB panel. The contractors supported the initiative. Given that this initiative took place in the context of DRBs where the DRB is only issuing a formal recommendation rather than a decision, it is interesting that it was felt that an earlier stage of advisory opinion would be helpful. The statistics quoted in Harman's study suggest that it was.

In my view, the most significant advantage of a dispute board (whether DRB or DAB) derives from the knowledge that the DB panel have of the project from the outset and the DB members' ability to utilise that knowledge and their own experience to assist the parties in managing and resolving disputes informally and as soon as the potential for dispute arises, without the need for a formal recommendation, decision or opinion. This informal process is not without some difficulties.

Firstly, it depends very much on the experience of and respect for the members of the DB and the understanding which the parties have of how to utilise the process.

Secondly, there are concerns, particularly in relation to a DAB, as to whether the expression of an informal view or opinion by the DAB before a dispute is referred to it prejudices in any way its ability to deliver a decision.³⁵

The 2008 edition of the FIDIC Gold Book contains an option for the parties to request the DAB to provide assistance or informally discuss a dispute and attempt to resolve it.

34 Bryson S Shipley, 'Expanding the DRB's Role' (1999) 22(2) *Punch List American Arbitration Association Inc.*

35 See *Lanes Group PLC v Galliford Try Infrastructure Ltd* [2011] EWCA 1617.

In the case of *Glencot Development & Design Ltd v Ben Barrett & Son (Contractors) Ltd* [2001] EWHC, TCC, Judge Humphrey Lloyd QC stated:

Discussions or a mediation of the kind which apparently took place...are or may be at variance with adjudication... There are clearly risks to all when an adjudicator steps from that role and enters a different arena and is to perform a different function.

If a binding settlement of the whole or part of the dispute results, then the risk will prove to be worth taking.

This difficulty between the informal process and the formal process may be exacerbated when the contract attempts to legislate for the informal process.³⁶ It may be better for the informal process to be permitted but to rely on the experience of the DB members as to how to conduct it.

In any event, the effort is normally directed at informal discussions with the parties from which the parties will reach their own conclusions without the dispute board having to render any informal opinion. This approach seems to have been borne out in Hong Kong where the Hong Kong Government Architectural Services Department has used a Dispute Resolution Adviser on at least 60 projects since 1995. A department study³⁷ found the following:

- Average cost savings with DRA – 2.2%;
- Average cost savings with other provisions – 1.75%;
- Increase in duration of the project through extension of time with DRA – 7.2%;
- Increase in duration of the project through extension of time with other provisions – 15.7%.

In summary, the available evidence – although mixed – and certainly the anecdotal evidence, suggests that where there is a willing acceptance by both parties of the DB process, it is effective in reducing the number of disputes that go to arbitration provided the DB process itself is not cumbersome or time consuming; there is respect for the DB members; and a reasoned decision or recommendation is

36 For a discussion of the requirements for arbitrators to act as mediators, see the judgment of Fisher J in *Acorn Farms Ltd v Schnuriger* [2003] 3 NZLR 121.

37 See an article by Andrzej Cierpicki 'The Dispute Resolution Adviser System' (2008) Asian Dispute Review.

issued by the DB, if they have not been able to resolve the issues by more informal means.³⁸

Whatever dispute resolution processes are adopted, due to the complexities and uncertainties of construction projects, their long gestation and delivery periods and high cost, an interim determination process, trusted by the parties, is critical as a last stop in risk management. In the past, that was to have been the Engineer/Architect's determination, followed by arbitration. Now, depending on your jurisdiction, it is adjudication or disputes boards, or a combination of them, followed by arbitration.

VI CONCLUSION

To the extent that there is a formula for successful delivery in major projects, in my view it will be a combination of some or all of the following:

- a transparent understanding of project uncertainty, and project risk
- an allocation of that risk which is rational
- a procurement process and form of contract which promotes cooperation and good faith behaviour
- a dispute process which identifies the potential for claim early, and promotes a fair resolution of any dispute as early as possible, albeit on an interim basis

Identifying and understanding uncertainty takes time and careful investigation.

A proper allocation of risk is generally not achieved by simply accepting a standard or doctrinaire approach.

Risks are usually project specific, and therefore need to be identified on a project by project basis. This is most effectively done by developing a risk register, first within the project team, then refining it during the tender process, and maintaining it after award on a collaborative basis with the contractor as work progresses. Skilled, experienced project teams for the employer and contractor working together from the outset of a project are important to this process.

When allocating that risk, careful consideration must be given to the levels of uncertainty over each risk, and the extent to which the risk can be avoided; and if it can't be avoided, its effects mitigated or managed. While most traditional forms of

38 In the article by Paula Gerber and Brendan J Ong 'DRBs Down Under: Ready for Takeoff!' (2012) 16(1) Dispute Resolution Board Foundation Forum 1, 1 it is stated: "DRBs have proven to be 98% effective in over 2000 DRB projects around the world...". The source for this statement and the definition of "effective" do not appear to be given.

contract do deal with project uncertainty, they do so loosely with formulae like the experienced contractor.

A better approach is to adopt the concept of an agreed baseline, where the parties formulate the most likely condition, upon which the contractor then prices. Any departures from that baseline condition, provided the contractor has actually relied on it and has actually incurred cost and delay, are then either compensated for on a previously agreed basis or valued at contract rates.

The final stage of appropriate management of risk is a prompt, cost effective dispute resolution process, which includes an interim determination process the parties can rely on. Such a process not only improves the resolution of disputes themselves but may have a beneficial impact on tender costs. This is probably no longer a role the engineer can fill.

There is now considerable choice between statutory adjudication in many parts of the world, contracted disputes boards, mediation, negotiated settlement, and if all else fails, arbitration.

