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AUSTRALIAN DEVELOPMENTS IN THE AVOIDANCE AND/OR MANAGEMENT OF DISPUTES IN MAJOR CONSTRUCTION PROJECTS.

By

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1. INTRODUCTION

The title of this session is *Developments in Resolving Controversies in Construction Projects*, with the added descriptive note: *Trends and issues regarding the methods of dispute resolution in construction projects around the world, and insight on how local perspective affects the process.*

The Australian legal system.

The Australian legal system is firmly based on the British common law adversarial legal system. The vast majority of contracts must include procedures which provide for final resolution of disputes[2] that arise during the course of the contract which are not able to be resolved between the parties themselves. Typically those final procedures involve arbitration and/or litigation. 'Dispute Resolution' encompasses less formal processes utilising third party assistance as well as the 'final' processes.

Alternative Dispute Resolution ('ADR') processes have flourished over the past 30 or more years, because of industry concerns with the high cost of proceeding with either of the 'final' processes. ADR procedures are regularly incorporated within contract conditions as a pre-requisite to activation of either of the 'final' processes for resolution of commercial disputes.

ADR embraces various processes for resolving construction disputes, such as Mediation, Conciliation, Expert Determination, Mini-trials and Negotiation. All of these processes are initiated after a dispute has arisen, i.e. they are **REACTIVE** processes that are initiated after the dispute event has to a greater or lesser extent become a fact of life. In reality, many of these processes run in parallel with the

[2] The term "dispute" is regularly used in industry literature with widely different meanings. The meanings used in this presentation are generally as follows. An *Issue* arises when the parties to a contract first identify differing opinions in regard to some matter associated with a party's contract obligations or scope of work. That may or may not lead to a *Claim,* which is a request for additional compensation by any party resulting from a particular issue. A *Claim* may lead to *Conflict* between the parties as to liability for payment. A *Dispute* arises when the claim has been rejected at the last level of job-site management.

commencement of the formal processes of Arbitration and/or Litigation. (I have deliberately not included DRBs in the above list of ADR processes, for reasons that will become clear in later sections). The focus of these ADR processes is on minimising expensive formal litigation and arbitration dispute resolution procedures, rather than assisting with the improvement of interparty relationships and/or the management of issues as they arise to **avoid** disputes.

An excellent current example of the ADR mentality is the theme of the national conference of the Institute of Arbitrators & Mediators Australia (IAMA) which will take place in Sydney in June 2011.

> ***"Appropriate Dispute Resolution- seize the future***
> *.... promote and stimulate an exchange of ideas around reforming the practice and application of ADR – safeguarding the strengths of traditional dispute resolution methods while emphasising the practical shift from "alternative" DR to "appropriate" DR."* (emphasis added)

IAMA is the leading dispute resolution organisation within Australia. Nevertheless, from a contract user's perspective, the questions that immediately arise are

- What constitutes an "*appropriate" DR* process?
- Should one be focused on dispute **avoidance,** rather than a cheaper method of dispute resolution?

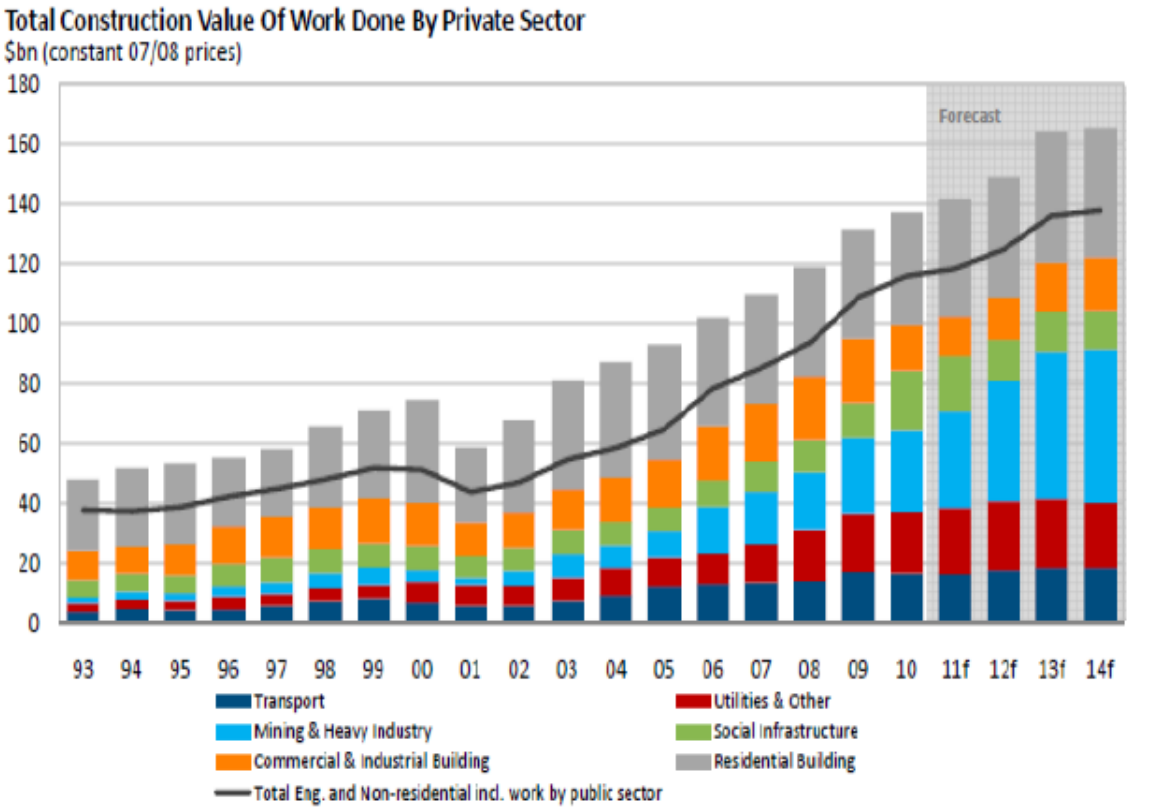
This paper discusses some recent studies within Australia into that topic and how the DRB concept is coming to be seen as a very beneficial tool for **dispute avoidance** in the larger project value sector of the construction market.

It should be noted that the contracts which have used DRBs in Australia have been purpose written (majority) or modified standard forms. FIDIC has rarely been used for domestic contracts.

2. THE SCOPE OF THE AUSTRALIAN CONSTRUCTION INDUSTRY

The value of construction work completed by contract within Australia, excluding residential building, was close to $120 bn. for financial year 2009-2010 (period 1 July 2009 to 30 June 2010). Separate statistics identify that in the same period, 81% of engineering construction work was done by the private construction sector and 19% by direct labour employed by public sector instrumentalities. The heavy black line is the total with the public sector component added in. The additional 19% is not relevant to dispute resolution.

The industry employs approximately 1 million people out of our population of about 22.6 million. By international standards, the private sector component of about $100bn per annum in 2010 is not large, but its efficiency is critical to effective development of all capital assets which are a foundation of the Australian economy.



Source: Macromonitor Jan. 2011. Total value of work done by the Private sector. Year end June.

3. SOME RELEVANT RECENT RESEARCH IN AUSTRALIA

Industry concern over the negative impacts of disputation on the successful delivery of construction projects has prompted numerous studies over a number of years, both within Australia and elsewhere. My objective here is to focus on a limited segment of developments in Australia, so I have selected two examples only which are relevant to my topic. I do not suggest that the few that I have selected are the only authorities on the subject, but in my view they encapsulate the findings of the great majority of studies.

2006 Industry Survey by Blake Dawson Waldron & Australian Constructor's Association.

Between October 2005 and January 2006, an industry wide survey of Australian construction projects was undertaken jointly by law firm Blake Dawson Waldron ('BDW') and the Australian Constructor's Association ('ACA'). The survey objectives included identification of out-turn performance of construction contracts, dispute causation, preferred methods of dispute resolution, linkages between out-turn performance and the level of disputation, and ways of improving both.

The survey questions were structured around the different aspects which arise during the lifecycle of a construction project [project definition, market request, risk allocation, contract negotiation, project execution and dispute resolution]. The survey traversed all project stakeholders in the industry. Participants included constructors, developers, government (federal and state), financiers, private sector principals and consultants involved in Australian construction or infrastructure projects in the previous three years (i.e., covering the period 2003 through 2005).

183 in-depth responses were received representing over $20 billion worth of expenditure[3] covering virtually all delivery methods, including Alliances. The survey analysis was followed by an in-depth report which is publicly available[4]. There are a number of significant findings in the published report. Those most relevant to the subject of this paper are briefly summarised below.

BDW/ACA 2006 Survey Findings

Inadequate scoping:

- 42% of projects are inadequately scoped prior to going to the market.

Time performance:

- Only 56% of projects identified in the survey were completed on time (taking into account granted Extensions of Time).

- Of the projects which ran late, 58% ran more than three months late.

- The greater the project value, the less likely it is that the project will finish on time.

[3] The names behind specific industry views cited in the report remain confidential.

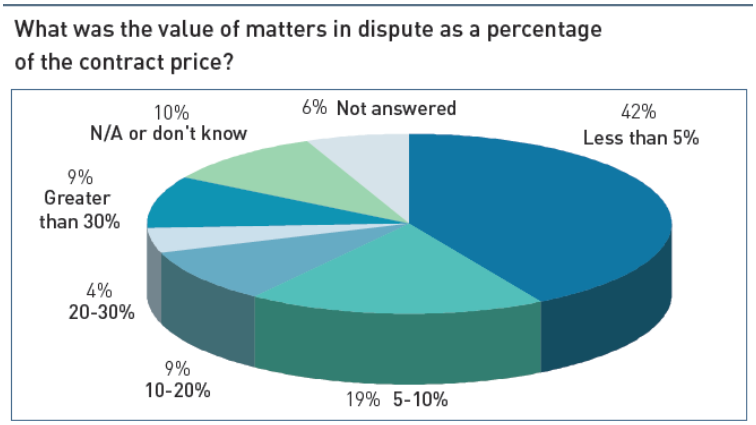
[4] 2006 ***Scope for Improvement*** http://www.blakedawson.com/Templates/Publications/x_publication_content_page.aspx?id=54519

- 66% of projects valued between $20 million and $50 million were completed on time,
- only 50% of projects valued at over $500 million were completed on time.

Distribution of disputes as a percentage of project value:

"The overwhelming majority of respondents said they had invoked a dispute resolution process in their projects" (quote from report text)

The value of disputes, as a percentage of contract value, is represented in the chart below reproduced from the BDW/ACA report.



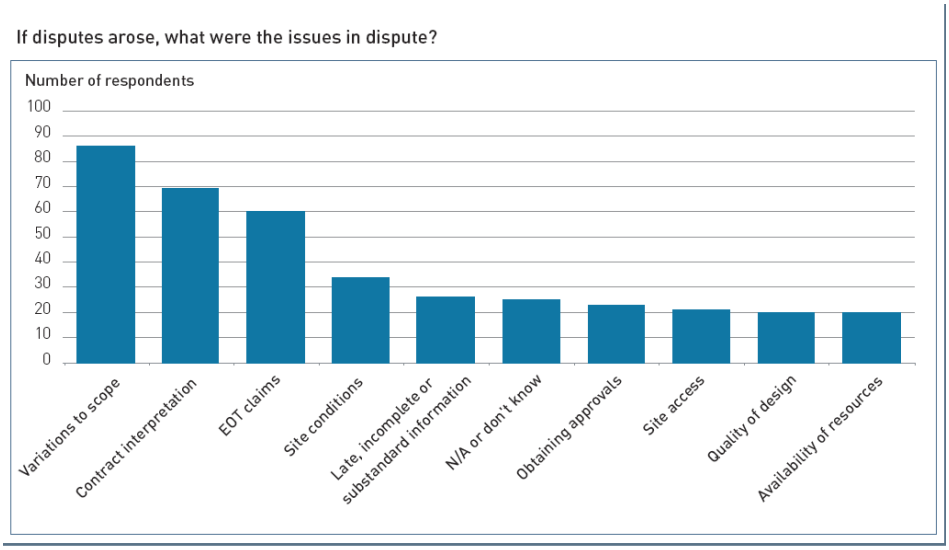
The survey data suggests fewer than 40% of all projects had no disputes. It is a relatively simple exercise to combine the industry $ turnover data of section 2 above with the BDW data to arrive at the view that about 8 % of $100 bn. (i.e., ≈ $8bn.) may be involved with construction disputes on an annual basis.

Industry experience is that much of this 'dispute resolution' effort carries on after the projects are completed - in some cases, several years after they have been completed.

From the perspective of both the contract parties and the community, this is wasted effort and an extremely undesirable state of affairs.

Causation of disputes

Survey responses as to causation of disputes are shown in the figure below, reproduced from the BDW report. The first highest ranked causes have been regularly reported in a number of international studies on the same topic, so the same type of issues keep arising no matter what the contract conditions or the culture of the participants.



Preferred method of dispute resolution

Project level negotiation (72%) and executive negotiation (59%) are the two most commonly used dispute resolution methods. The report notes that this reflects three issues:

- the prescriptive nature of the multi-tier dispute resolution clauses in (Australian) project contracts,
- the desire of executives to negotiate and agree on an outcome to disputes, rather than having a third party impose a decision,
- the cost of resolving a dispute when it is decided by a third party is often seen as outweighing the benefits.

There is in fact a fourth factor which is relevant to the most commonly used 'negotiation' percentage (apart from the natural human desire to work it out by discussion!) which was possibly not known to the BDW team. Separate Australian research in 2008/09[5] suggests that 90% of all construction contracts have a value less than $20m. In that contract value range, negotiation is far simpler and as one would expect, is the most commonly used method of dispute resolution. When one ranks 'method of resolution' by contract number rather than value of dispute, it is inevitable that 'negotiation' will rank highest.

Level of satisfaction with Dispute resolution processes in common use.

[5] RMIT University, Research report No. 2007-006-EP-03, 21 November 2008, *Dispute Avoidance and Resolution – Strategies for dispute avoidance*, Table 2.2.

The report notes that "*when disputes do arise, parties are often dissatisfied with the resolution procedures stipulated by the contract."* Across all project values and organisations, 33% were satisfied with the time taken to resolve disputes, 39% were satisfied with the cost of dispute resolution but only 22% were satisfied with the process.
It was also found that satisfaction with the effectiveness of a dispute resolution method used decreased as the project value increased. In projects worth $200-$500 million, only 9% of respondents were satisfied that the resolution process used was effective compared to 25% in the $20-$50 million range.

Expressed negatively, across all project values, 78% of respondents were dissatisfied with the dispute resolution process. For projects in the $200-$500 million range, 91% were dissatisfied with the effectiveness of the dispute resolution method used, compared to 75% dissatisfied in the $20-$50 million range. So even at the lower end of the '>$20m-and-above' contract value range, the dominant industry view was that there had to better methods than those in common use.

The section of the BDW/ACA report dealing with recommendations for improvement includes the following :

- *Traditionally, insufficient attention has been given to dispute resolution clauses prior to contract signing*.

- *Consider alternative approaches to dispute resolution which are **proactive**, such as appointing a neutral and independent specialist from the industry to act as a sounding board for the benefit of the project as a whole*... (emphasis added by me)

At the time the BDW/ACA survey was completed, DRBs[6] were just beginning to make an appearance on the Australian construction scene. The Dispute Resolution Board Australasia ('DRBA') was formed in May 2003. A 1998 survey published in the IAMA journal[7] noted that at that time, only 8% of

[6] The terms 'Dispute Board' or 'Dispute Resolution Board' are generic and include the 'Dispute Review Board' (DRB) – USA origin, providing nonbinding recommendations; the 'Dispute Adjudication Board' (DAB) a FIDIC model based on the US model, but which provides an interim binding decision; and the 'Combined Dispute Board' (CDB) which is a hybrid of DRBs and DABs created under a scheme introduced by the ICC in 2002. For convenience of reference, the term 'DRB' used in this document encompasses all the above variants.

[7] Peter M Trainer, *Dispute avoidance and resolution in the Australian construction industry- part 1* (1998) 17 (1), The Arbitrator & Mediator, 32-57.

respondents had any direct experience with DRBs compared 80 to 90% of respondents who were familiar with Arbitration, Mediation and Expert Determination. Little had happened to change that situation prior to DRBA formation. Thus very few of the survey respondents had been exposed to DRBs during the period covered by the survey.
Notwithstanding the limited exposure of the industry to DRB concepts at that time, the second of the BDW/ACA report findings quoted above comes very close to describing the concept underlying the DRB process.

The CRC for Construction Innovation 2007-2009 research Project - "Dispute Avoidance & Resolution"

The '*Cooperative Research Centre for Construction Innovation'* operated within Australia from 2001 until December 2009. It undertook a number of significant research studies into different aspects of the construction industry. All of its studies were undertaken jointly with, and partly funded by, a representative cross section of industry participants. One of its last projects was the *Dispute Avoidance and Resolution* (or 'DAR') project, undertaken over the period 2007 to 2009[8].

The aim of the DAR project was to identify and communicate to key industry stakeholders "*recommended change management strategies to avoid contractual disputes between clients, contractors and other industry stakeholders, and where disputes cannot be avoided, to manage disputes more effectively*".
The reports generated by this study are available at www.construction-innovation.info .
The conclusions reported in the final (November 2009) report included the following:

- *managing changing circumstances is an essential element of any project delivery process. It is hard to conceive of a project where changing circumstances do not arise.*(section D2)

- *Particularly in large projects, clients, designers and contractors are simply unable to achieve a successful project outcome without effectively managing the changing circumstances inevitably encountered as the project progresses*.(section D2)

[8] The author of this paper was a member of the Steering Committee established by *CRC for Construction Innovation'* to overview the DAR project.

- *the alliance model .... is focused on best-for-project outcomes and with providing the alliance management team with appropriate oversight and shared governance. By doing so, many of the influences on change are effectively managed and aligned with the performance outcomes* (section D3).

- *It is open to project teams formed under other delivery strategies, to borrow from the alliance model, and provide for a leadership team, made up of people not directly involved in the day-to-day management of the project, to focus on the quality of relationships and the playing out of roles and responsibilities with a "best-for-project" focus.* (section D3)

- *An alternative approach is to appoint a project "coach", whose role is to monitor the behaviour of the project team, and that of the client, at regular intervals, to flag possible problems and encourage open communication to address them.* (section D3)

- *Another approach is to appoint, at the outset, a DRB to deal with issues that cannot quickly be solved at project site level. The DRB may be one or more people, charged with informally advising parties on issues as they arise. The experience of the industry in Australia with DRBs is that if appointed early in the life of the project, the parties are often motivated, as a matter of professional pride, to resolve issues promptly rather than be seen to require the services of the DRB.* (section D3). (emphasis added by me)

The last two bullet points above again recommend processes similar or identical to the concepts behind the DRB procedures.

Summary of relevant research

Before any significant awareness of the DRB concepts had developed within the Australian construction industry, an independent study involving fully representative industry groups had concluded that the adoption of a **proactive** issue resolution process which focused on resolution of issues at the project level would contribute substantially to the successful delivery of any major capital project.

A second independent study undertaken a few years later, but after the commencement of DRBA, underlined the benefits to be gained from the use of concepts similar to those promoted by the DRBF,

and specifically named the **proactive** approach of DRBs as one of the preferred methods of avoiding disputes on major construction projects within the Australian environment.

The following sections of this paper further discuss the development of DRBs within Australia, with particular emphasis on the past 8 years since DRBA was first established and the actual performance of projects which have utilised DRBs.

4. DISPUTE RESOLUTION BOARD FOUNDATION, AUSTRALASIA CHAPTER

The DRBF Australasia Chapter [registered name 'Dispute Resolution Board Australasia Inc', otherwise 'DRBA'] was formally established in May 2003[9]. An Australia wide launch supported by DRBF representative Larry Rogers[10] was entirely sponsored by the Australian Contractors Association (ACA). The ACA contributions to the launch presentations included the following statement of their objectives in encouraging the use of DRBs on major contracts:

- *Make Industry less litigious*
- *Avoid Confrontation/ Disputation*
- *Improve Contract Outcomes*
- *Run projects within budget for Time and Cost*
- *Manage issues during the currency of project*
- *Eliminate carry over issues to post completion*
- *Work with clients in a spirit of mutual respect, good faith, co-operation and enthusiasm*

Since its launch, DRBA has operated as a completely independent organisation , and apart from a small contribution from DRBF in 2005, has been entirely self supporting. However, the moral support of the Australian Constructor's Association and its members has been a significant factor it its growth and is gratefully acknowledged here.

DRBA business Plan

DRBA's business plan has been in place almost since formation with its primary objectives unchanged, viz:

[9] See www.drba.com.au

[10] Education and Membership Director, DRBF, May 2003

- *expansion of the understanding of the DRB concepts as an extremely cost effective and efficient process for, in the first instance,* ***dispute avoidance*** *on construction projects, and where that outcome proves impractical, timely and economic dispute resolution;*
- *promoting the use of DRBs as the preferred dispute prevention and resolution model for major contracts;*
- *providing assistance to parties within the industry for the establishment and application of DRBs, including the provision of general advice and suggestions for tailoring to suit particular needs.*

The DRB difference - PROACTIVE PROCESSES FOR AVOIDANCE OF DISPUTES

Relationship management is a fundamental requirement: A perfect project is a rarity!

Despite the dedication and skills of those who are associated with the various aspects of construction projects, perfection of individuals is a rarity and as we all know, a score of 10/10 on any task or assignment does not often happen. That applies whether one is setting up the contract documentation, producing the design, or planning and undertaking the construction of that design. The likelihood of imperfection increases non linearly with size and/or complexity of the project.
Thus imperfection is a reality of construction projects, and change during the course of a complex project is an almost inevitable outcome of that reality.
Every 'change' [be it an owner's requirements, a design detail, or a construction method change] gives rise to potential opinion differences as to how it should be dealt with, or who is responsible for any cost or time consequences. Thus "issues" or "conflicts" arise between the respective project teams. If differences of opinion harden or are allowed to fester, disputes are likely to develop. An effective issue management process focused on interparty relationships is therefore a primary requirement for successful delivery of any construction project.
This fact is concisely summarised in a quotation included in the forward to the 1999 ACA publication *'Relationship Contracting'****;***

> *Today there are many different approaches that are applied to project structures and organisations; from the traditional lump sum to "partnering" arrangements between the constructor and client.*
>
> *No matter which structure is adopted, fundamental issues such as project scope and deliverables must be agreed. However for a project to be truly successful, the quality of the*

people and strength of the relationship is the key to success. Developing mutual respect and trust, that enables transparency and information sharing is the foundation for a successful outcome"[11].

DRB Concept Fundamentals

Other presentations in this conference are dealing with the fundamentals of DRBs. At the risk of repetition, the following summarised extracts from the 1996 *Dispute Review Board Manual* [12] reflect many of the concepts identified in the Australian research studies already referred to in section 3 above.

- *Disputes result in a substantial dilution of effort, delays, and diversion of capital.*
- *Inefficient contracting practices can constitute a serious barrier to the application of new technology and to the containment of rapidly escalating construction costs and contract disputes.*
- *Many of the specific recommendations .....are aimed at mitigating the deleterious effect of claims, disputes, and litigation upon the efficiency of the construction process.*
- *DRBs have been found to be applicable in all sectors of the construction industry.*
- *Project partnering ..... involves building a mutual understanding of goals and objectives among key people on the job, and .. achieves its most dramatic success when both contract parties are committed and a problem resolution hierarchy is established that extends to the upper levels of management.*
- *The positive (as opposed to adversarial) attitudes fostered by partnering are fully compatible with the non adversarial resolution of disputes facilitated by DRBs.*

The objectives of the DRB concept as set out above reflect basic commercial common sense, viz:

- Encourage the parties to articulate issues as they arise
- Promote discussion and resolution of issues by the parties while the work is in progress
- Establish a pre-agreed panel of experts with continuous knowledge of the project and exposure to any issues while the work is in progress to provide a sounding board of difficult

[11] H M Morgan, Managing Director, WMC Resources Ltd (comment: WMC were a major user of construction services in the 1990s.)

[12] *Dispute Review Board Manual*, McGraw-Hill 1996; Matyas, Mathews, Smith, Sperry

issues as they arise, and a quick and simple method of resolving issues that the parties are unable to resolve by discussion.

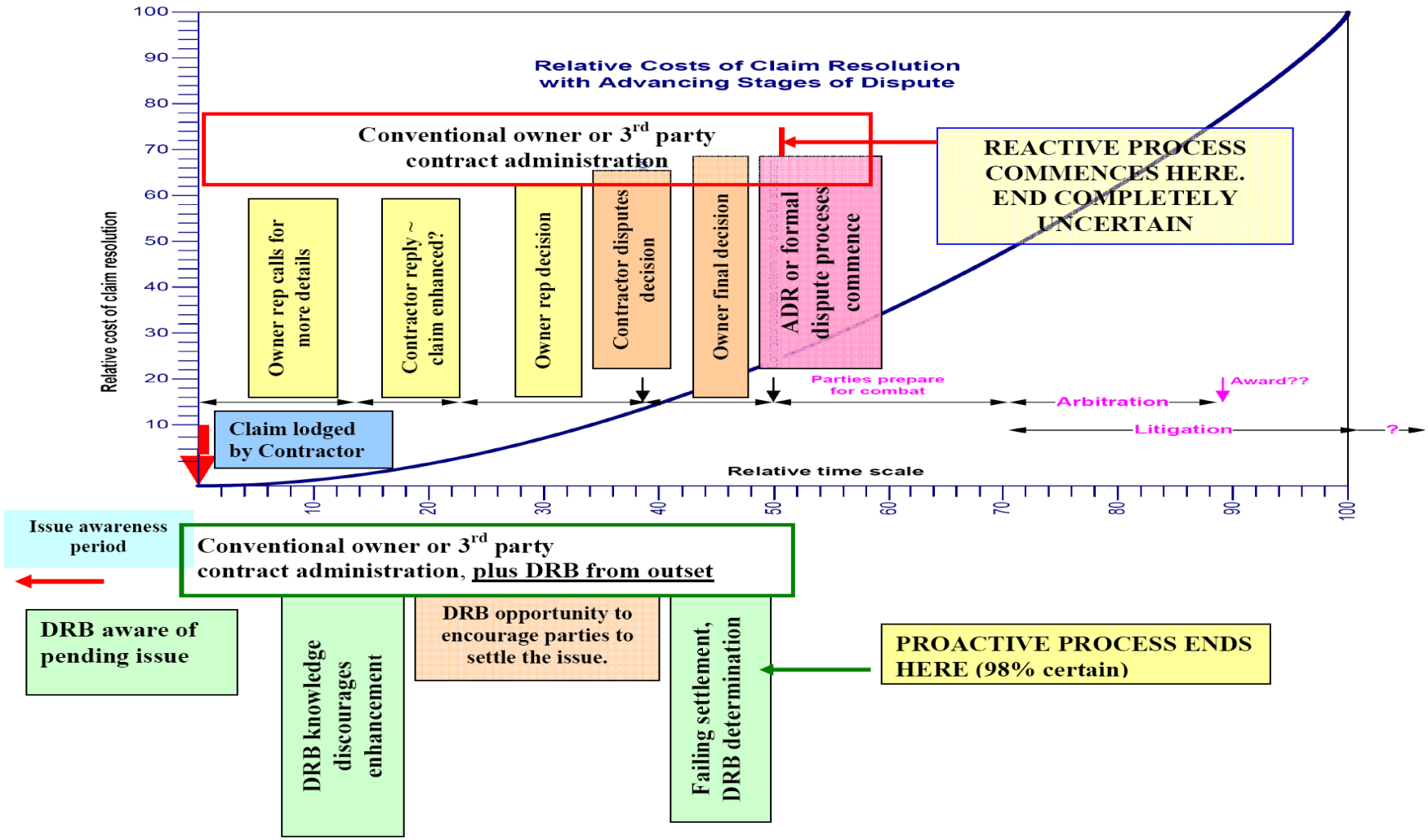
A DRB should be Proactive, not Reactive

While DRBs are frequently classed as another form of ADR, the DRB process as originally conceived is **Proactive** rather than **Reactive,** and it is this very substantial benefit that differentiates it from conventional ADR processes.
While certain variants of the DRB concept have been used which focus only of dispute resolution, we in Australia consider these variants focus on the concept name ("*Dispute Resolution*") rather than the principles as first enunciated (and summarised in the section above). The formation of a DRB only after disputes arise misses out completely on the factor which truly differentiates DRBs from other **Reactive** ADR processes – the opportunity to **avoid disputes** altogether**.**

A DRB process which is in place from the project outset is the only "**Proactive**" process which can influence participant behaviour and substantially reduce the probability of "issues" escalating into "disputes" – thus **avoiding disputes** . This is the approach that has been adopted within Australia.

Proactive issue resolution processes do not displace the contract terms or conditions, but they are frequently able to encourage the contract parties to consider the almost inevitable lack of perfection in any complex set of contract documents (ie the 'grey' areas) and seek to achieve the originally intended contract outcomes on a 'best for project' approach without unnecessary cost or delay to any contract party.

The figure below is a diagrammatic representation of the difference between a conventional Reactive contract administration process and that which applies with a Proactive process such as a DRB is in place.


Relative Costs of Claim Resolution
with Advancing Stages of Dispute
Relative cost of claim resolution
Relative time scale
Conventional owner or 3rd party
contract administration
REACTIVE PROCESS
COMMENCES HERE.
END COMPLETELY
UNCERTAIN
Owner rep calls for more details
Contractor reply ~ claim enhanced?
Owner rep decision
Contractor disputes decision
Owner final decision
ADR or formal dispute processes commence
Parties prepare for combat
Arbitration
Award??
Litigation
?
Claim lodged by Contractor
Issue awareness period
Conventional owner or 3rd party
contract administration, plus DRB from outset
DRB aware of pending issue
DRB knowledge discourages enhancement
DRB opportunity to encourage parties to settle the issue.
Failing settlement, DRB determination
PROACTIVE PROCESS ENDS
HERE (98% certain)

In summary, a DRB which is in place from the commencement of a project process is able to:

- Emphasise the value of open and honest communications between the parties and the maintenance of project relationships,
- Assist with resolution of issues wherever possible before they escalate into disputes.

If issues do become formal disputes, the DRB is familiar with the project from commencement, so is able to structure the simplest possible referral process and to deliver reasoned decisions in the shortest practical time, having full regard to the contract provisions.
Those decisions are usually available for use in any subsequent proceedings if the DRB decision is not accepted; i.e., DRB formal decisions are "With prejudice".

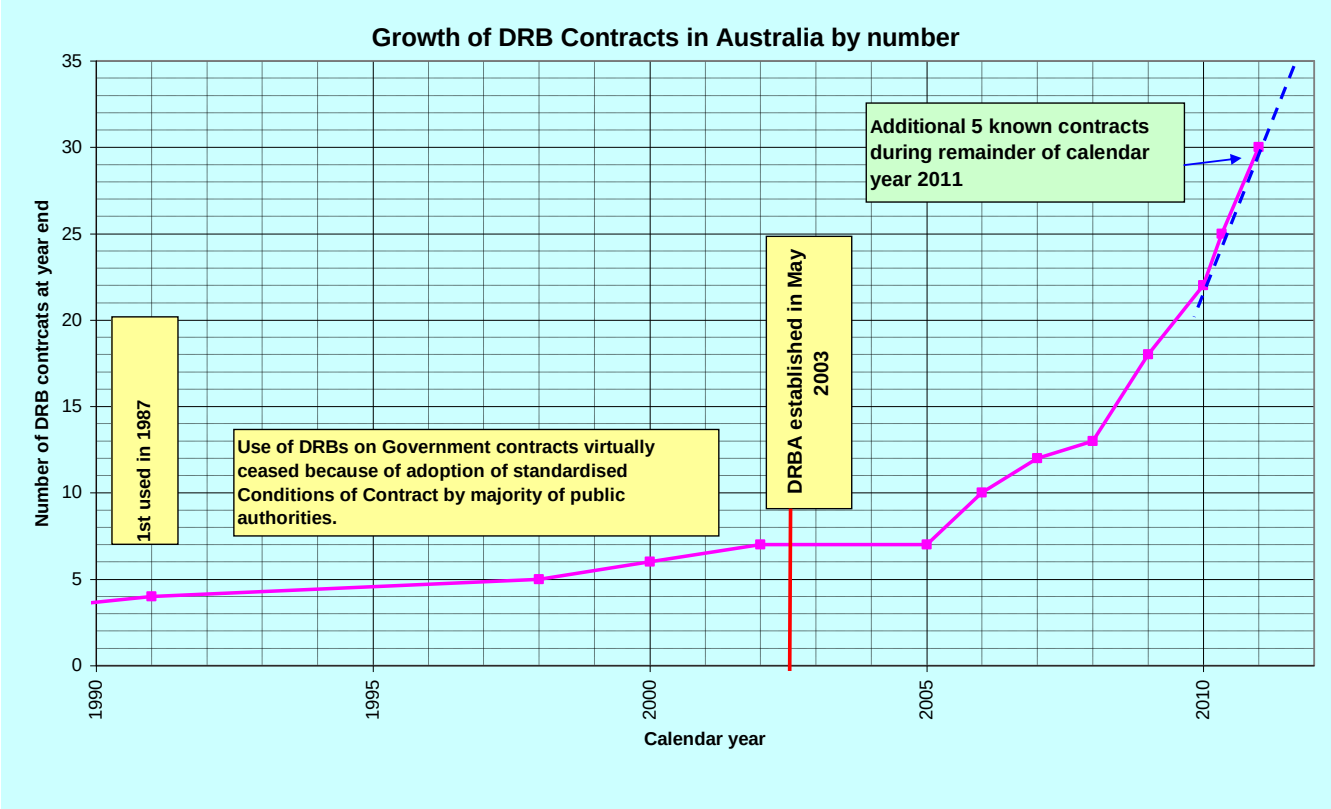
5. THE ACTUAL GROWTH OF DRBS WITHIN AUSTRALIA.

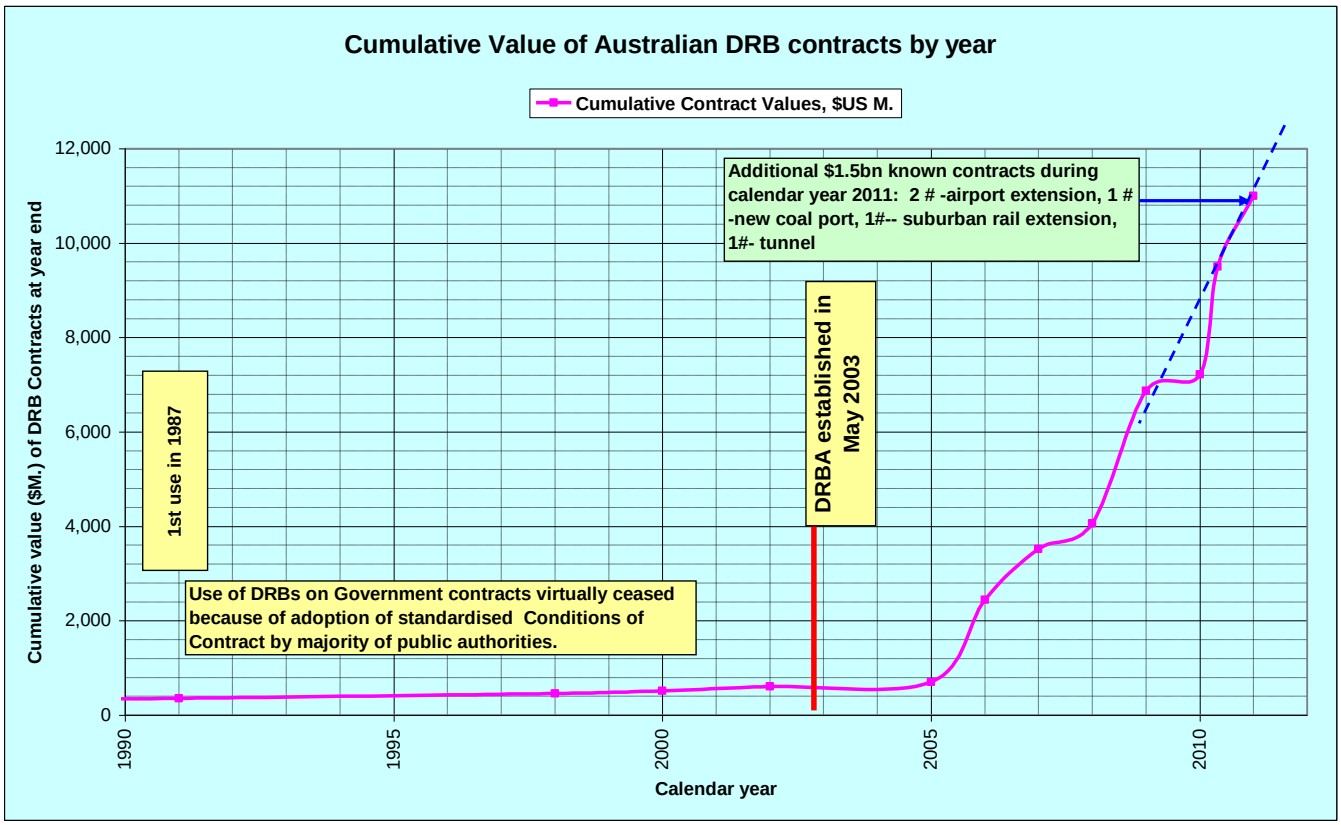
The first use of a DRB on a contract within Australia was at the instigation of the USA consultants (Hatch & Jacobs) who were retained by the Sydney Metropolitan Water Sewerage & Drainage Board in association with the Australian consulting group John Connell & Partners for the design and supervision of the three Sydney Ocean Outfalls, which commenced in 1987.
While more than 80% of construction in Australia is undertaken by private contractors, about 40% by value of total construction work is for Federal or State government instrumentalities. Thus contract conditions developed and imposed by the various State and Federal government authorities dictate or strongly influence the form of dispute resolution procedures in use. Since the late 1980's, the common approach to dispute resolution in these contract conditions involves a strictly **Reactive** process. If not resolved at site level, a compulsory round of senior executive negotiation (between executives who have probably never before heard the other side of the story), is followed by a 3rd party Expert Determination process if the latter does not work. The Expert must have had no prior association with the project, so commences with no prior knowledge of the project details or the events leading up to the Expert Determination. The Expert's determination is binding for minor issues (generally <$500k) but non-binding for major issues. For the latter, conventional arbitration and/or litigation follow if the determination is disputed. If this happens, If not accepted, the Expert's findings are "without prejudice".

These forms of dispute provisions in contracts are still widely used and continue to lead to a significant number of formal disputes extending well beyond the completion of the physical contract work, even when they commence during construction.

Through the late 1990's (and continuing today), the increasing industry focus on methods of improving both contract outcomes and the level of disputation has created fertile ground for a concept such as that offered by DRBs. However, the Australian experience is that the formation of an active local group promoting their use is essential before significant industry acceptance (at the Contract drafter level) is likely.

The charts below show the growth of DRB usage, in both contract $ value and DRB numbers, since 1987 and the influence of the formation of DRBA in 2003.





6. ACTUAL PROJECT EXAMPLES

The benefit of local examples of success.

While the international experience with DRBs is a very important reference point, the DRBA experience has been that successful local experience is what really matters for generating impetus to the concept acceptance. The best reference point for a potential Owner or legal group advising an Owner is from one of their industry peers who have been happy with their experience. Similarly, contractors who are satisfied with the process quickly spread the word.

Taking the BDW survey results as an example, at the large project end of the market a 91% dissatisfaction rate amongst industry participants with the effectiveness of the dispute resolution methods in use in the period 2003-2005 means that there was a large community of project participants who were seeking better methods of proceeding.

The completion record of DRB projects in Australia since 2006

The ultimate decision for adoption of DRBs lies with the project Owners and their legal advisors. From an Owner's perspective, the simplest measures of a successful project are that it is on time, within budget, meets the quality and/or performance objectives expected of the finished product and the paperwork is finished when, or very soon after, the project is operational.

From a contractor's perspective, similar measures apply. Claims need to be closed out when, or very soon after, the project is completed to allow accounting closure[13].

Relevant to the above parameters, the following statistics apply to the DRB contracts so far completed or substantially completed since 2005. (Similar data prior to DRBA formation is not generally known).

(performance data to April 2011)

Total # of Contracts	Projects with referrals	Total No. of referrals	Gross value of Initial Contract Sums ($M)	Gross value of Adjusted Contract sums with Agreed scope changes ($M)	Gross value of Claims settled in addition to Agreed scope changes ($M)	Completion time status of Projects		
						On time or ahead	Late	> 3 mths late
14	3	5	5,832	6,173	123	12	2	1
1. Statistics include one contract with uncertain data on outcome time & final cost. 2. A further $3 Bn contracts are in progress & not included. Indications to date are consistent with the included projects.				"Agreed scope changes" includes 1 project with $97m of options which were either Pre-agreed, or negotiated shortly post award, + a $184m variation for a 5 km x 6 lane expressway extension negotiated at about the 80% complete stage of the original scope.				

[13] The inclusion of claims made but not settled, as an asset in any contractor's balance sheet, is a highly debated issue. In the author's personal view as a one-time Director of a very successful public listed construction company, such an accounting practice is quite unwise.

Comparative Summary, Australian DRB contracts vs 2003-2005 BDW Survey non-DRB contracts			
Value range of DRB Projects	Min[m] = $35m (1 less than $60M)	Max[m] = $1.8 Bn	Average = $406m
	DRB contracts complete or substantially complete		Industry norm as BDW survey, comparable value non-DRB contracts,
% of projects completed on or ahead of time	87%		<56%
% of projects completed > 3 mths late(see note below)	6.7%		27%
% of projects with no referrals	80%		<40% did not require activation of the dispute resolution process
Average no. of referrals per project	0.33		Not available
Average cost increase including agreed scope growth & settled claims	8.7%		Not available
Average claims over & above agreed scope growth	0.64%		14.7 % (may include some of the item above)
Note: The one contract in the "> 3 months late" category was the subject of a renegotiated contract. Both parties agree that without the DRB involvement, this contract would have finished with a major dispute.			

While the DRB contract sample to date is small compared to the BDW industry survey sample of 183 projects and $20Bn, the indications are very positive and compare favourably with various DRBF international surveys.
The trends on all presently operating projects (a further $3 Bn in value) not included in the above sample are equally positive.

USA data

A DRBF presentation by Larry Delmore in 2007 indicated as below:

> North American record thru 2005.
>
> Number of completed projects: over 1000
> Total construction value: $44 billion
> Avg. number disputes/project: 1.3
> **60%** of projects with DRBs had **no disputes**
> **99%** of projects with DRB recommendations had **no subsequent arbitration or litigation**

The average number of referrals per project in these overall statistics appears to be distorted by a few early and very large projects which had some difficulties.

Anecdotal evidence [14] is *that early in the process it was experimental, and many issues were brought to the DRBs that should never have reached the stage of a hearing*. The level of referrals has reduced significantly as contractors come to realise that the DRB is not there to remove from them the responsibility for adopting a realistic and sensible approach to claim submissions, and DRB members

[14] Private communication, J Norton , DRBF Executive Board, April 2011.

have gained experience and adopted a much more proactive approach. It was reported that current practitioners expect that between 70% and 80% of DRB contracts will have no referrals.

7. SPECIFIC PROJECT EXAMPLES

Overview

This section of the paper includes specific examples of four major projects utilising DRBs which have produced extremely satisfying results for the project owners and, prima facie, acceptable results for the Contractors. Their project profitability is not known, but the absence of serious disputes suggests that they too have been satisfied with the outcome.

I note here that the specific project details and photographs which follow have been approved for release by all of the contracting parties, which approval is gratefully acknowledged.

Three of the four projects involved acceptance by the contractors of extreme risk profiles, tight programs, and heavy liquidated damages provisions. The fourth was the third in a series of three contracts for expansion of the rolling stock for the Sydney suburban electrified passenger rail network. The two previous contracts followed the Owner's traditional Design and Build 'all risks' contract approach, with a result that could at best be described as extremely unsatisfactory for all contract parties.
That dissatisfaction led the parties to a new approach utilising a relationship contract in conjunction with a DRB. This example is an excellent illustration of how a cooperative approach can change the dynamics of interparty relationships, with very positive commercial results for all parties.

The project details which follow are in summary form only.

1. Sydney's 250 Ml/d desalination plant

A contract summary, without commercially sensitive data, can be viewed at http://www.sydneywater.com.au/water4life/Desalination/overalldocumentation.cfm#top .

Summary details:

Purpose written Contract

Awarded 18/7/07.

DRB tripartite agreement signed 17/8/07.
1st DRB meeting 29/10/07
Start work on site 12/11/07.

Contract completion dates:

125 ML/d : 14/02/10

250 Ml/d : 16/05/10

Cost performance (rounded):

At award: $1,000,407,000

Final: $1,003,000,000 incl $10m bonus for safety.

Actual Completion dates:

125 ML/d : 18/02/10

250 Ml/d : mid May

Official opening of plant:
19/04/10

No. of referrals to DRB

Zero

The Project won the 2010 Government Partnership Excellence Award in the 2010 National Infrastructure Partnerships Australia *"Project of the Year"* Awards and was a finalist for the "*Project of the Year*" Award

It is also a finalist in the 2011 **Australian Construction Achievement Award.**

Project photo selection follows

2. Gateway Upgrade Project

See also Queensland Motorways website at
www.qldmotorways.com.au/currentprojects/gatewayupgradeproject.aspx

Purpose written Contract

Contract Award 26/09/2006

DRB appointed Jan 2007
1st DRB meeting 5/03/2007
Work start on site 16/02/2007

Initial Scope & Price:
18.9 km of 6/8 lane expressway + Brisbane R bridge duplication
Contract sum @ award = $1.35 Bn

Cost Outcomes:

1. Revised Scope:
Pre-Agreed & negotiated scope changes (Deed of Variation) up to mid 2008 = $97m

2. 5 km negotiated 'Project Extension' at ≈ 80% complete stage = $185m. (Deed of Variation)

3. Miscellaneous claims **& early completion 'bonus'**, settled between the parties ≈ 1.7% of adjusted contract sum

Original Time requirements

5 Separable portions – 3 for intermediate section openings, 2 for new bridge (#4) and existing bridge upgrade after new bridge opened (#5)

The 5 km 'Project Extension' is due for completion mid year.

Actual Time achievements.

2 of the 3 intermediate Separable portions met, 1 was late by 3 months.

New Bridge opening (#4) & Final completion of original work (#5) – **7 months ahead of time**.

This has been affected by the extreme weather conditions experienced in the Brisbane area in January.

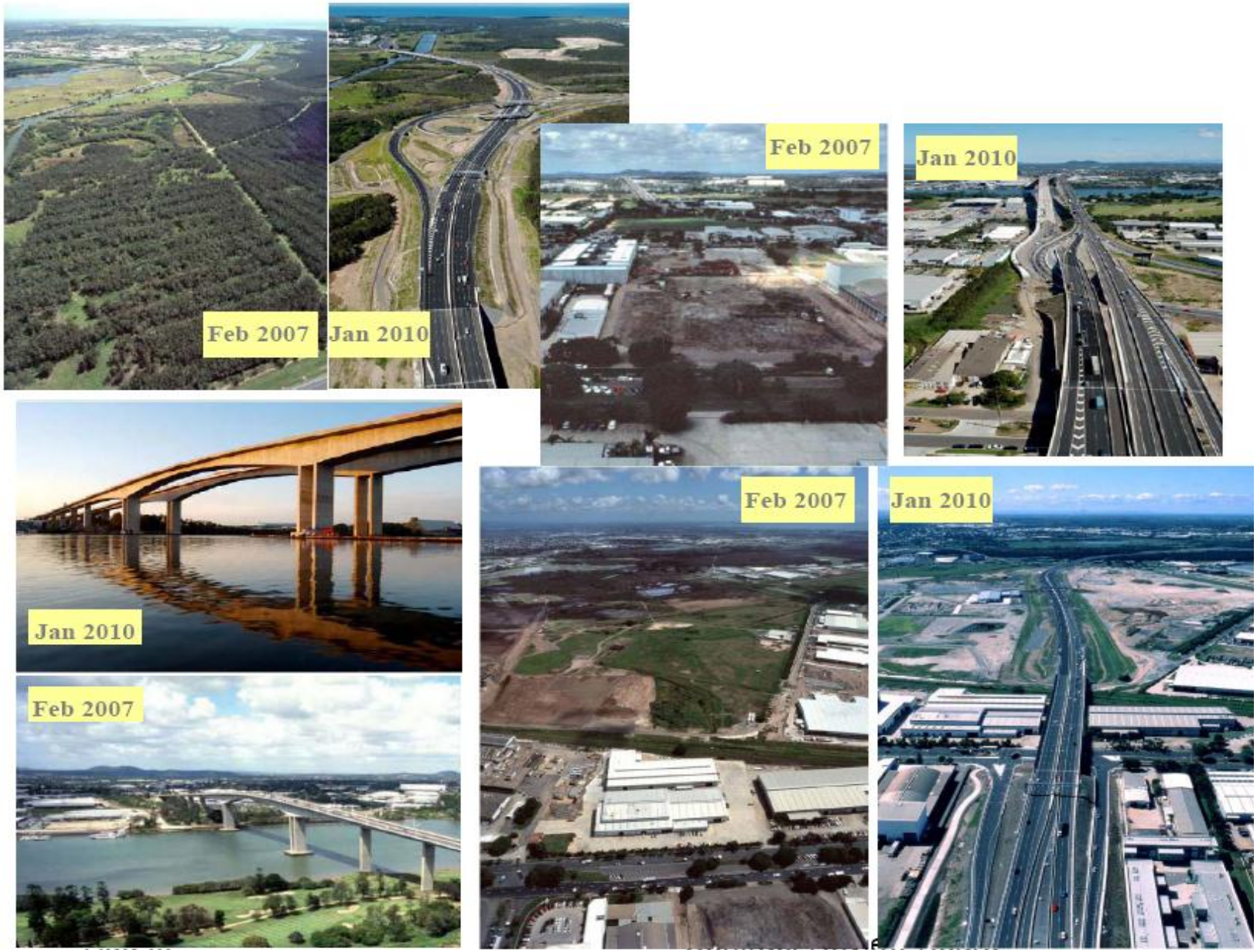
DRB referrals:

2 matters referred to DRB

Decisions on both.
One settled. Cost implications of one remains under discussion between the parties.

Other
Recipient of Infrastructure Partnerships Australia 2011 National Infrastructure Award.

Photo Selection follows


Feb 2007
Jan 2010
Feb 2007
Jan 2010
Jan 2010
Feb 2007
Feb 2007
Jan 2010

3. Port Botany Expansion

Summary details:

Purpose written Contract

Contract award date: 20/12/2007

DRB appointed: 21/12/2007
1st DRB meeting with parties: 14/04/2007
Work start on Site: May 2008

Cost performance (rounded)

Original Contract Sum: $516m

Adjusted Contract Sum (Agreed Scope variations) : $526m

Other claims: $1.85m

Contract Completion Dates

Original: 7 March 2011
Extended date ("abnormal weather") : 11 May 2011

Actual Completion dates:

Construction Completion : 21 April 2011

No of referrals to DRB

Zero

Project photo selection follows

Photo 4 – New Boat Ramp (Foreground) & New Terminal Area (Background)

4. OSCar 3 - Design, Build & Commission of 18 x 4 car suburban train sets.

Purpose written contract.

- Described as a "quasi Alliance", but is effectively an 'ECI' Relationship Contract, with defined risk allocation, cost reimbursable components & a Pain/gain share arrangement.
- Target price at award ≈ $335m
- DRB in place from outset.
- Excellent relationships developed, zero referrals to DRB at 70% point.
- First trains achieved ahead of time & cost.
- Contract now extended by a further 5 x 4 car sets plus 2 spare cars. Revised target price ≈ $440m.
- Joint entry submitted for Infrastructure Partnerships Australia 2011 National Infrastructure Award.

COMPARE:

- Previous 2 conventional contracts with same Contractor, no DRB;
- > 1 year late, much over budget, + major arbitrations.

Photo selection follows


via Hurstville


23 02 2010

8. CONCLUSION

Dispute avoidance is emerging as a primary role for DRBs – at least as important as dispute resolution recommendations.

The DRB process involves a Board chosen by the Contract parties regularly interacting with the parties. The chance of success in avoiding disputes is greatly enhanced in an atmosphere of openness and frankness where full disclosure and feedback are freely given and ongoing dialogue is permitted.

Australia has adopted a practice of making the proceedings of DRB routine meetings 'without prejudice'. This extends to all discussions, minutes of DRB meetings (prepared by the DRB, not a party representative), and reports prepared by the parties for routine DRB meetings. [Normal business records retain their usual status]. This encourages open, honest and frank dialogue between the parties, and provides an excellent opportunity to avoid the escalation of issues into disputes.

The Australian experience with the DRB process to date demonstrates that a focus on **dispute avoidance** from the outset of a project more than justifies the expense of a DRB in place from the project commencement.

DRBA does not encourage project Owners to delay appointment of a DRB until there is an actual dispute, and the project parties who have proceeded this way (to date, 100%) entirely agree with this approach.