



CRC Construction Innovation  
BUILDING OUR FUTURE

# Research Report: Strategies for Dispute Avoidance





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# Research Report

## Strategies for Dispute Avoidance

**Report No. 2007-006-EP-03**

Editor Nick Blismas (RMIT University)

The research described in this report was carried out by RMIT University. This report should be read in conjunction with two separate reports produced by Curtin University and Newcastle University.

Project Leader Rick Collins, Leighton Contractors

Contributors from RMIT University  
Dr Nick Blismas  
David Jellie  
Professor Ron Wakefield  
James Harley

Project Affiliates  
Curtin University of Technology  
Queensland Department of Public Works  
Queensland Department of Main Roads  
Queensland Building Services Authority  
Leighton Contractors  
Brisbane City Council  
Thiess  
University of Newcastle  
John Holland  
Department of Housing and Works  
RMIT University

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Please direct all enquiries to:

Chief Executive Officer  
Cooperative Research Centre for Construction Innovation  
9<sup>th</sup> Floor, L Block, QUT, 2 George St  
Brisbane Qld 4000  
AUSTRALIA  
T: 61 7 3138 9291  
F: 61 7 3138 9151  
E: [enquiries@construction-innovation.info](mailto:enquiries@construction-innovation.info)  
W: [www.construction-innovation.info](http://www.construction-innovation.info)

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## **PREFACE**

The project team would like to thank all persons and companies that offered their time for workshops, interviews and case studies. Our particular thanks to those who offered valuable information for the examples in this report.

# EXECUTIVE SUMMARY

This report details the data collection and analysis undertaken for the CRC-Construction Innovation project titled, 'Dispute Avoidance and Resolution'. The outcomes from this document informed the production of the *'guide to best practice'*. Questionnaire surveys and workshops were used to gather data from over 50 industry personnel to ascertain the scope and types of contracts currently in train; the sources of disputes; examples of good and bad practice; suggested strategies for avoidance of disputes; and preferred dispute resolution processes.

The following principles and strategies were derived from the data:

1. Demonstrate leadership in construction contracts
  - Foster a collaborative, open and constructive team approach
  - Foster open communication between all parties
  - Encourage and foster mutually respectful and honest behaviour
  - Establish a senior management resolution and review body
  - Establish rules and expected behaviour early
  - Allow parties to manage their projects adequately without external interference
  - Clarify and establish lines of authority and communication
2. Confirm project needs
  - Develop a clear scope for the project
  - Invest adequately in the design stage of the project, including addressing constructability
  - Ensure the timeframe and budget are adequate for the scope
3. Develop a contract strategy and allocate risk appropriately
  - Allocate risks to those best placed to manage them
  - Use clear standard contracts and terms
  - Develop broad selection criteria (including non-price) and effective tender evaluation process
  - Issue good quality documentation for tendering and contract
  - Notify and involve contractors early – in the pre-tender stage of the project process
  - Pre-qualify and select preferred contractors
  - Select an appropriate procurement contract approach

- Ensure there is a shared understanding of the project scope and deliverables
  - Contracts should contain fair conditions including the equitable handling of claims
  - Establish clear policies for scope or project variations and agree rates
  - Create performance incentives beyond cost only
4. Manage projects professionally
- Ensure early notification and resolution of issues and disputes
  - Administer contracts reasonably and adequately
  - Deal with claims in a positive and timely manner
  - Make timely decisions that impact other parties
  - Allocate sufficient resources to complete the project as agreed
  - Keep adequate records and establish processes
  - Establish common procedures and responses to contractual issues
  - Continually review program and methods across the team
5. Develop people in good practices
- Engage in development and training of personnel
  - Encourage stable adequately skilled project teams
  - Discourage personalisation of disagreements and disputes

# 1 INTRODUCTION

## 1.1 Context

Contract disputes are endemic in the Australian construction industry. It is not known precisely what they cost the Australian community, but conservative estimates suggest that the annual cost to the economy is in the order of many billions of dollars. This cost is borne not only by clients and contractors, but also by the community through the management of the taxpayer-funded Federal, State and Territory court systems.

There are direct costs in disputes such as legal services, arbitration, consultants, courts, and the diversion of in-house resources (both legal and non-legal) to manage dispute processes – for both clients and contractors. When disputes proceed to litigation in the courts, the direct costs can be significantly high and are often comparable to the scope of the claim itself.

There are also indirect costs incurred by the parties such as delays to the project, adverse performance of the project, distraction and over-burdening of staff on the project, reduced morale, erosion of confidence and trust in working relationships, adverse impact on the reputation of the parties, emotional impact on people involved, lost opportunities for future work, destruction of business relationships, and the loss of people to the industry because of wasted effort, disillusionment and frustration. Disputes may also contribute to inflation of future project costs through higher tendered prices based on previous experience in similar work. It is unanimously agreed that the construction industry needs to reduce and avoid disputes.

Every construction project is unique in scope, nature or location. Each has a different set of challenges and is managed by different groups of people having their own preferences and prejudices. What is needed in the Australian construction industry is a set of consistent guidelines based on consistent principles of best practice. Dispute avoidance relies primarily on the technical/commercial skills of project managers and their ability to personally interact with others in an impartial and non-adversarial manner. It requires a genuine commitment to high standards of professionalism and the correct and proper application of the requirements and obligations of the contract documentation and schedules to which the parties have agreed through their signatures and seals on the contract.

This document concentrates mainly on avoidance of disputes as distinct from methodologies for the resolution of disputes. The Cooperative Research Centre (CRC) for Construction Innovation is committed to collaborating with business and government to improve productivity through innovation and best practice programs in the Australian construction industry. This document reports the work undertaken by RMIT to inform the creation of this guide to best practice.

## 1.2 Project Objectives

This report details the research undertaken for the CRC-Construction Innovation project titled, 'Dispute Avoidance and Resolution'. The outcomes from this research have formed the basis for the production of a practical '*guide to best practice*'. The objectives for this strand of the project were:

- To determine the underlying principles of conflict management in commercial disputes as they relate to the Australian construction industry;
- To ascertain the range and types of proactive dispute avoidance strategies successfully employed in construction projects;
- To ascertain the range and types of dispute resolution strategies that successfully facilitate the equitable, certain, amicable, timely and cost effective resolution of disputes;
- To provide case examples of these strategies as employed in construction projects;
- To articulate these findings into a practical '*guide to best practice*' for use by the industry to implement some of these practices.

### 1.3 Research Strategy

Qualitative and quantitative data was sought from construction industry participants (clients, contractors and sub-contractors) through a questionnaire which aimed to identify the following:

- *The scope and types of contracts currently in train.* These data provided information on the size and current contracting models used for different types of facilities across representative organisations in the three states of Queensland, New South Wales and Victoria – for both public and private sector procurement.
- *The sources of disputes.* Curtin University of Technology conducted a parallel strand of the research project to identify the main, contributing factors leading to contract disputes. However, in order to collect appropriate data for the dispute avoidance aspect of this project, the team had to make assumptions regarding the main causes of disputes. These causes were derived from the CRC for Construction Innovation report 2008-006-EP-01 titled *Dispute Avoidance and Resolution, A Literature Review, Report No 1*, edited by Professor Danny McGeorge and Associate Professor Kerry London.
- *Examples or case studies of good practice and bad practice.* The purpose of this information was to collect examples of good practice for use in the final publication for break-out boxes – as well as to draw conclusions on how to avoid bad practice.
- *Suggested strategies for avoidance of disputes.* This section aimed to explore further any remedies that participants believe avoid disputes. It also aimed to identify any proactive and innovative ways to deal with issues before they evolve into formal disputes.
- *Preferred dispute resolution processes.* Although dispute resolution is not a part of this assignment, inappropriate resolution procedures may themselves be the cause of a dispute and lead to escalation or worsening of disputes. This section aimed to explore industry's preferences for use in the guidelines.

The data was collected using two methods, namely a questionnaire survey and focus group interviews. These were undertaken as follows:

- A structured questionnaire survey of appropriate individuals in the industry was conducted across participant organisations. The surveys were distributed electronically via email to

contacts within each of the identified organisations. Fifty (52) responses were received by participants, almost all of whom participated in the focus groups. All information received from participants was collated and analyzed to inform and direct the overall development of the guidelines;

- A series of eight (8) focus group interviews with 55 persons from industry were completed in Melbourne, Sydney and Brisbane to verify and enhance the data collected through the surveys in order to inform the *Guide*. During these discussions potential case examples of dispute avoidance and resolution strategies were gathered for use in the *Guide*.

Further details regarding sample sizes are included in the chapters that present the results.

## **1.4 Delimitations**

Due to the limited scope of the project, the research was only able to survey current practice in industry with a view to identifying good practices for incorporation into the *Guide*. The scope did not permit a study of any depth that could propose any major theoretical innovations to dispute avoidance. All evidence from the research points to leadership as the main factor for driving cultural change in the construction industry.

The limited scope further hindered the range of responses that would be ideally required for such a study. Data was gathered primarily from large experienced client and contracting organisations. The results of the survey are therefore biased towards these organisation types and cannot be fully representative of disputes in the industry as a whole.

## **1.5 Structure of the Report**

This report presents the results of the research undertaken to inform the production of the *Guide*. The report consists of four chapters as follows:

- Chapter 1 introduces the report together with the objectives and limitations;
- Chapter 2 presents the data collected from the surveys and focus groups of industrial participants.
- Chapter 3 analyses the data presented in chapter 2, drawing conclusions for use in the *Guide*.
- Chapter 4 proposes an outline of Principles, and Strategies for the development of the *Guide*.

## 2 SURVEY AND FOCUS GROUP RESULTS

### 2.1 Introduction

Chapter 1 introduced the report and objectives of this strand of the project. This chapter describes the data collection undertaken and reports the main findings that are analysed in chapter 3.

Data collection was undertaken in two parts, through i) a questionnaire survey and ii) a series of focus groups. The focus groups followed the surveys and allowed more detailed interrogation of disputes and the modes for avoiding them. The surveys sought data in three main areas. Firstly they provided a confirmation of the causes of disputes for the team to use as a basis for the focus group sessions. Second they offered background information on the organisations being interviewed, by giving a sense of the size and variety of projects and their procurement routes. Finally the surveys gave an indication of the most common dispute avoidance strategies currently adopted by the industry. The next chapter (3) analyses the data and categorises these for use in the *Guide*.

### 2.2 Questionnaire Survey

In order to appreciate the main causes of disputes, respondents were asked to complete a questionnaire nominating the most common causes in their experience. Two types of survey were used; one for clients awarding contracts to contractors, and the other for contractors undertaking work for clients. Appendix A and B contain copies of both types of questionnaire. The questionnaires consisted of five sections. Each section elicited specific data as follows:

**Section 1** surveyed the scope and types of contracts of the respondent organisations.

**Section 2** sought to determine the main sources of disputes. The section requested this information from two aspects – the frequency of a cause and its impact. Both Frequency (of cause of dispute) and Impact (to the project) was rated high (H), medium (M) or low (L). Respondents were also given the opportunity to add other sources not listed.

**Section 3** gave respondents an opportunity to describe examples or cases of good practice that avoided disputes and bad practice that lead to or exacerbated disputes.

**Section 4** suggested strategies for the avoidance of disputes and asked respondents to record practices that could be adopted to avoid disputes.

**Section 5** asked respondents to rate their preferred dispute resolution processes and document any other processes not documented.

## 2.2.1 Survey sample and response

Surveys (as in Appendix A and B) were electronically sent to 12 organisations, of which 11 returned completed surveys. In total 52 individual surveys were received as detailed in Table 2.1 below. The variety of respondents within these organisations assured that an adequate range of views were collected. The titles of those surveyed (most of who were later interviewed in focus groups) included the following:

Project manager, Construction manager, Manager - finance & administration, Manager - finance and commercial, Building operations manager, Engineer, Contract administrator, Commercial Manager, Contract Manager, General Manager, Regional Commercial Manager, Senior Architect, Business Development Manager, Commercial and Government Building Division Manager, Contract Superintendent, Assistant Director, Executive Director (Special Projects), A/Executive Director, Legal advisors among others.

The number of surveys returned per organisation was satisfactorily spread about the mean of between 4 and 5. Only two of the responding organisations deviated significantly from the mean, with the one returning one survey and the other eight. The views across these organisations are therefore deemed to be sufficiently representative of the respondents. However, there was a distinct lack of representation from sub-contractors. One of the focus group was specifically organised to provide specific sub-contractor input to address this deficiency. The results of section 1 are summarized below and presented more fully in Appendix C.

The limited scope of the sub-project unfortunately hindered the collection of more views from subcontractors and SME (small and medium enterprises) organisations involved in the construction process.

**Table 2.1: Outline of surveys returned by organisation.**

<b>Organisations</b>	<b>Type of organisation</b>	<b>Surveys returned</b>
Brisbane City Council	Client	8
Queensland Main Roads	Client	5
Queensland Public Works	Client	5
Vic Roads	Client	5
John Holland (NSW)	Main contractor	4
John Holland (Qld)	Main contractor	6
Leighton Contractors (NSW)	Main contractor	5
Leighton Contractors (Qld)	Main contractor	5
Leighton Contractors (Vic)	Main contractor	3
Thiess	Main contractor	3
Civil Contractors Federation (Vic)	Sub-contractor	3
<b>Total Returned</b>		<b>52</b>

Section 1 of the questionnaire gathered data on features of the respondents' projects and contracts. The range of project size and types of the respondents' organisations is shown in Table 2.2 and Table 2.3 below. It should be noted that these figures are significantly biased by high numbers from organisation 11 (a state roads authority). These figures and proportions were however corroborated by another state's road authority.

Not surprisingly most projects are under \$20 million in value and are conducted as traditional-based contracts. There is an expected correlation between size and procurement route, with large projects (over \$200 million) being delivered under collaborative contracts. A continued significant emphasis on traditional-based contracts was evident from the survey results. This indicates that although collaborative contracts may mitigate against disputation, corrective guidance needs to be targeted towards traditional procurement. The sample used is also biased towards infrastructure and civil engineering with a smaller representation from building construction. The range of project types undertaken by respondents' organisations is outlined in Table 2.4.

The next section (2.3) presents the main results of the survey drawing out the main responses from sections (2-5) of the survey.

**Table 2.2: Size of contracts undertaken (all respondents).**

Size of contracts by respondents' organisations	Number	%
Up to \$20 million	1058	90.3
\$20 million to \$50 million	43	3.7
\$50 million to \$200 million	42	3.6
Over \$200 million	29	2.5
<b>Total</b>	<b>1172</b>	<b>100</b>

**Table 2.3: Number of projects by procurement types (all respondents).**

Number of projects per procurement type	Number	%
Traditional	1292	91.4
Design and Construct	94	6.7
Collaborative	27	1.9
<b>Total</b>	<b>1413</b>	<b>100</b>

**Table 2.4: Range of project types undertaken by the respondents.**

Engineering Construct'n (Infrastructure)	Building Construction
<ul style="list-style-type: none"> <li>▪ Dams</li> <li>▪ Tunnels</li> <li>▪ Bridges</li> <li>▪ Highways and roads</li> <li>▪ Airport runway</li> <li>▪ Aircraft hangers</li> <li>▪ Railway maintenance, improvement, sleeper manufacture etc.</li> <li>▪ Pipelines</li> <li>▪ Water treatment plants</li> <li>▪ Communication networks</li> <li>▪ Sewage works</li> <li>▪ Electrical transmission infrastructure</li> <li>▪ Desalination plant</li> </ul>	<ul style="list-style-type: none"> <li>▪ Schools and education</li> <li>▪ Hospitals</li> <li>▪ Commercial office towers</li> <li>▪ Government buildings, incl. police stations, court houses</li> <li>▪ Commercial buildings</li> <li>▪ Recreation centres and swimming pools</li> </ul>

## 2.2.2 Section 2 – Sources of disputes

Section 2 of the survey, which sought to confirm the causes of disputes, allowed RMIT to proceed to the focus groups in an informed manner. The data from section 2 is presented in appendix D and summarised in table 2.5 below. This section of the survey is not a detailed study of dispute causation. For a detailed analysis of the causes of disputes consult the CRC for Construction Innovation research report number 2008-006-EP-02 titled, '*Causal ascription of disputes in construction contracts*' by Love *et al.* (2008). The final chapter of this report proposes a synthesis of the aforementioned report and the strategies developed in this project.

### **Clients**

The surveys completed by clients were analysed and are presented in Tables D.1-3.

From their own perspective, the majority of client respondents rated contractual factors as occurring on a low to medium frequency. The majority also rated these factors as having a low to medium impact, except for two. These two factors, 'Unrealistic pricing at time of tender' and 'Failure to manage sub contractor' were rated as having a high impact.

The majority of client respondents rated all human factors as occurring at a low frequency. All factors were rated as having low to medium impact, except for 'Incompetence of contractor's management staff', which rated high. In general all External factors were rated as occurring at a low frequency as well as having a low Impact.

The clients then responded to the survey from a contractor's perspective. The majority of respondents rated the Contractual factors as occurring at a low to medium frequency whilst also having a low to medium impact. Only one factor, 'Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents' was rated by the majority of respondents as having both a high frequency and high impact. This amounts to an admission that their quality of documentation is poor.

The majority of respondents rated human factors as occurring infrequently, except 'Inflexibility and intransigence of client's staff to understand contractor's position and consequences of decisions' which attracted a medium frequency. The majority of respondents subsequently rated the impact of all factors in this section as medium. Again most respondents rated all External factors as occurring at a low frequency, with low to medium impact.

### **Contractors**

The surveys completed by contractors were analysed and are presented in Tables D.4-6.

Responding from their own perspective, the majority of respondents rated most Contractual factors as occurring at a low to medium frequency. Factors that respondents considered to occur at the highest level included 'Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents' and

‘Post-contract changes to design details or the scope of work’. Those factors where the majority of respondents rated a high frequency with a high impact included ‘Post-contract changes to design details or the scope of work’, ‘Unreasonable allocation of risk’, and ‘Differences in contract interpretation’.

All human factors were rated by the majority of respondents as occurring on a medium frequency. These factors had a medium impact except ‘Lack of communication’, which had a high impact. The majority of respondents attributed a low frequency to all external factors except ‘Latent conditions’. These factors also rated as having a low to medium impact. ‘Latent conditions’ was the only item to attract a medium frequency with a medium to high impact.

Contractors responding from a client’s perspective, rated the frequency with which contractual factors occurred as between low to medium. All but two of these factors attracted a corresponding medium impact. Two factors attracted a high impact – these were ‘Failure to provide sufficient resources or equipment for the project’, and ‘Not proceeding with work when a dispute arises’, the latter occurring at a low frequency. The majority of respondents rated Human factors as occurring on a medium frequency and having a medium impact. While, the majority of respondents rated all External factors as occurring at a low frequency, and attracting a low to medium impact.

### ***Aggregate response***

The data was finally aggregated, amalgamating the responses of clients and contractors. Understanding the causes of disputes, afforded by the aggregation, provided the necessary context for data interpretation and also informed the research team when undertaking the focus group interviews. In general it was agreed, both between clients and contractors, that those issues manifesting as contractual factors were those that had the greatest impact and generally highest frequency when compared to human and other factors. However the sources of disputes are often driven predominantly, directly and/or indirectly, by “human factors” rather than contractual “process factors”. The distinction between these two groups should therefore be treated cautiously, and were used merely as a distinction for the administration of the survey.

These key factors can be broadly summarised as:

- Non performance in schedule/program;
- Unrealistic pricing at tender;
- Failure to provide sufficient resources or equipment for the project;
- Not proceeding with work when a dispute arises;
- Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents;
- Unreasonable allocation of risk;
- Time consuming and expensive dispute resolution procedures;
- Post-contract changes to details and scope;
- Lack of communication; and
- Reactive rather than proactive approach to dispute resolution.

Almost all these factors were nevertheless deemed relevant to some extent in a project dispute, although varying in frequency and impact. Given these sources of disputes the next section provides the results of the survey and focus groups, listing good and bad practices together with strategies for dispute avoidance.

Table 2.5: Aggregate findings of the cause of disputes as reported by both clients and contractors.

	Client responses		Contractor responses		Aggregate responses	
	<i>Response</i>	<i>Item summary</i>	<i>Response</i>	<i>Item summary</i>	<i>Response</i>	<i>Item</i>
<b>Client Perspective</b>						
<b>Contractual Factors</b>	Low frequency High impact	<ul style="list-style-type: none"> <li>▪ Unrealistic pricing at time of tender</li> <li>▪ Failure to manage sub contractor</li> </ul>	High impact	<ul style="list-style-type: none"> <li>▪ Failure to provide sufficient resources or equipment for the project</li> <li>▪ Not proceeding with work when a dispute arises</li> </ul>	Low-med. frequency High impact	<ul style="list-style-type: none"> <li>▪ Non performance in schedule/program</li> <li>▪ Unrealistic pricing at tender</li> <li>▪ Failure to provide sufficient resources or equipment for the project</li> <li>▪ Not proceeding with work when a dispute arises</li> </ul>
<b>Human Factors</b>	Low frequency High impact	<ul style="list-style-type: none"> <li>▪ Incompetence of contractor's management staff</li> </ul>	Low-med. frequency Medium impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>	Low-med. frequency Medium impact	<ul style="list-style-type: none"> <li>▪ Lack of communication; and</li> <li>▪ Reactive rather than proactive approach to dispute resolution</li> <li>▪ And all other factors</li> </ul>
<b>External Factors</b>	Low frequency Low impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>	Low frequency Low-med. Impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>	Low frequency Low impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>
<b>Contractor perspective</b>						
<b>Contractual factors</b>	High frequency High Impact	<ul style="list-style-type: none"> <li>▪ Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents</li> </ul>	High frequency High impact	<ul style="list-style-type: none"> <li>▪ Post-contract changes to design details or the scope of work</li> <li>▪ Unreasonable allocation of risk</li> <li>▪ Differences in contract interpretation</li> </ul>	Low-med. frequency High impact	<ul style="list-style-type: none"> <li>▪ Unreasonable allocation of risk</li> <li>▪ Time consuming and expensive dispute resolution procedures</li> <li>▪ Poor documentation</li> </ul>
<b>Human factors</b>	Low frequency Medium impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>	High Impact	<ul style="list-style-type: none"> <li>▪ Lack of communication</li> </ul>	Low-med. frequency Medium impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>
<b>External factors</b>	Low frequency Low-med. impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>	Med frequency Med-high impact	<ul style="list-style-type: none"> <li>▪ Latent conditions</li> </ul>	Low frequency Low-med. impact	<ul style="list-style-type: none"> <li>▪ All factors</li> </ul>

### 2.2.3 Sections 3 and 4 – Practices and strategies for dispute avoidance

Sections 3 and 4 of the survey provided the richest source of data for the project. Of the 52 survey respondents 46 offered examples of good and bad practices, and suggested strategies for dispute avoidance. The results from both of these sections were transcribed and are presented in Appendices E and F.

The good practices and suggested strategies of the two sections largely mirrored each other, and expectedly related back to the identified causes of disputes. Initially all practices and strategies were categorised into the three themes used within the survey instrument (see Table 2.6). The category Contractual Factors featured around 60% of the practices identified, these being equally split between positive and negative practice examples. Human Factors accounted for almost all the rest of the factors (37%), divided almost equally between the two practice types. Other Factors only offered one positive and one negative practice.

**Table 2.6: Statistics of practices identified in the initial analysis of sections 3 and 4 of the survey.**

<b>Survey Categories</b>	<b>Positive practices</b>	<b>Negative practices</b>	<b>Total</b>
Contractual Factors	31	31	62
Human Factors	21	17	38
Other Factors	1	1	2
Total	53	49	102

The full list of identified practices is provided in Table 2.8 below. These factors were analysed in greater detail with different categories and correlations. In Table 2.7, negative signs indicate bad practices while positive signs the opposite. Note that: many factors listed as ‘Contract Factors’ are driven predominantly, directly and indirectly, by ‘human factors’ rather than by contractual ‘process factors’. This distinction merely reflects the headings used in the survey.

**Table 2.8: List of practices extracted from sections 3 and 4 of the survey.**

Contract Factors	Human Factors
<ul style="list-style-type: none"> <li>- Absence of reasonable latent conditions clause</li> <li>- Assumed all risks taken by contractor</li> <li>- Award contract on price only</li> <li>- Award contract on relationship not ability</li> <li>- Capped budget of client drives behaviour</li> <li>- Compliance approach by client towards contract staff</li> <li>- Conflicting contracts (with main contract)</li> <li>- Contractor takes-on incomplete design</li> <li>- Excessive, dubious or aggressive claiming</li> <li>- Failure to administer contract adequately</li> <li>- Inadequate staff to administer contract by client</li> <li>- Insufficient resources to complete the project</li> <li>- Lack of documented precedents for contractual decisions</li> <li>- Lack of experience or competence for the works</li> <li>- Micro-management by principal</li> <li>- Non-resolution of issues</li> <li>- Poor constructability in designs</li> <li>- Poor construction documentation</li> <li>- Poor sub-contractor documents and processes</li> <li>- Poor understanding of scope and goals</li> <li>- Poorly defined contract and scope with many scope changes</li> <li>- Refer all matters in writing through official channels only</li> <li>- Risk 'selling' by clients</li> <li>- Superintendent's lack of independence</li> <li>- Time restrictions for reasonable claims</li> <li>- Unapproved changes by contractors</li> <li>- Under-priced tender</li> <li>- Unfair conditions of contract that are one-sided</li> <li>- Unrealistic project program</li> <li>- Unreasonable and slow responses to legitimate claims</li> <li>- Use contract for protection and leverage</li> <li>+ Adequate investment at design stage</li> <li>+ Adopt appropriate delivery method</li> <li>+ Agree rates for variations</li> <li>+ Agreement of contracts with main contract</li> <li>+ Award tenders to 'aligned' companies</li> <li>+ Award to qualified and adequately resourced companies</li> <li>+ Clear scope and terms</li> <li>+ Continual review of programme and method</li> <li>+ Create performance incentives</li> <li>+ Discuss risks openly</li> <li>+ Separate designer and client's onsite representative</li> <li>+ Do not time-bar claims</li> <li>+ Early notification and resolution of issues and disputes</li> <li>+ Effective pre-qualification system</li> <li>+ Ensure sufficient resources for the project</li> <li>+ Establish clear dispute resolution paths</li> <li>+ Establish effective tender evaluation processes</li> <li>+ Fast response to RFIs and other requests</li> <li>+ Guidance on procurement and contract selection</li> <li>+ Issue of good quality documentation</li> <li>+ More client participation in tender</li> <li>+ Pay claims/invoices expeditiously</li> <li>+ Pre-tender discussion and early contractor involvement</li> <li>+ Provide claims entitlement guidance to teams</li> <li>+ Senior management group with a resolution and review role</li> <li>+ Setting reasonable timeframe and budget</li> <li>+ Share risks as appropriate to manage</li> <li>+ Understand contractors entitled to profit</li> <li>+ Use Dispute Resolution Group/Board to resolve disputes</li> <li>+ Use non-price selection criteria</li> <li>+ Use standard contract</li> </ul>	<ul style="list-style-type: none"> <li>- Aggressive attitude with no compromise approach</li> <li>- Authority and communication lines unclear</li> <li>- Change of key personnel or high staff turnover</li> <li>- Egos and personalities</li> <li>- Incompetence or inexperience of people on the project</li> <li>- Indecision by parties with late or slow agreement</li> <li>- Inflexible attitude</li> <li>- Lack of emphasis on non-cost/time project performance criteria</li> <li>- Lack of mentoring for young engineers</li> <li>- Lack of relationship</li> <li>- Lack of support for other parties</li> <li>- Lack of trust</li> <li>- Master-servant attitude</li> <li>- Personalisation of disputes</li> <li>- Poor communication</li> <li>- Self-interest</li> <li>- Unwilling to share responsibility</li> <li>+ Build and manage relationships</li> <li>+ Change personnel if necessary</li> <li>+ Consistent personnel</li> <li>+ Continue works while issues resolved</li> <li>+ Establish community of practice to train</li> <li>+ 'Give &amp; take' approach to negotiation of issues</li> <li>+ Good open communication between parties</li> <li>+ High level of trust between parties</li> <li>+ Honesty</li> <li>+ Legal/contract administration training</li> <li>+ Limit use of the contract</li> <li>+ Management support of project decisions made</li> <li>+ Mutual respect</li> <li>+ Open constructive and collaborative approach</li> <li>+ Proactive approach to the project by the client</li> <li>+ Set rules and expected behaviour early</li> <li>+ Shared understanding of deliverables</li> <li>+ Skilled personnel with adequate training</li> <li>+ Strong decisive leadership</li> <li>+ Teamwork approach</li> <li>+ Willingness to accept responsibility for errors</li> </ul>
	<p><b>Other Factors</b></p> <ul style="list-style-type: none"> <li>- Political drivers of the project</li> <li>+ Shield project from third parties (incl. political influence)</li> </ul>

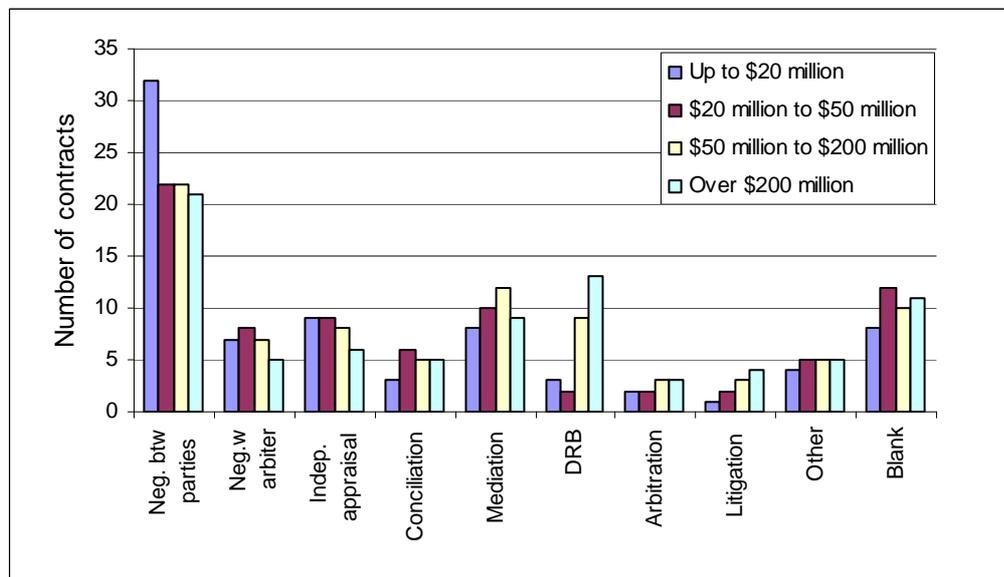
## 2.2.4 Section 5 – Preferred dispute resolution processes

The final section of the survey determined the preferred dispute resolution processes of the respondents, correlating these against size of project. Table 2.9 and Figure 2.1 illustrate these preferences and clearly demonstrate that negotiation between parties is the primary form of resolution for all sizes of project. Litigation and arbitration are understandably the least preferred processes, with a very low incidence in smaller projects.

These results indicate that a *Guide*, containing practices which encourage negotiation and teamwork between parties to resolve issues before they become disputes would be welcomed by industry.

**Table 2.9: Preferred Dispute Resolution Procedure according to size of contract (n=49).**

No.	Processes	Up to \$20 million	\$20 - \$50 million	\$50 - \$200 million	Over \$200 million	Up to \$20 million	\$20m - \$50 million	\$50 - \$200 million	Over \$200 million
1	Neg. btw parties	32	22	22	21	65%	45%	45%	43%
2	Neg.w arbiter	7	8	7	5	14%	16%	14%	10%
3	Indep. appraisal	9	9	8	6	18%	18%	16%	12%
4	Conciliation	3	6	5	5	6%	12%	10%	10%
5	Mediation	8	10	12	9	16%	20%	24%	18%
6	DRB	3	2	9	13	6%	4%	18%	27%
7	Arbitration	2	2	3	3	4%	4%	6%	6%
8	Litigation	1	2	3	4	2%	4%	6%	8%
9	Other	4	5	5	5	8%	10%	10%	10%
0	Blank	8	12	10	11	16%	24%	20%	22%
	<b>Totals</b>	<b>77</b>	<b>78</b>	<b>84</b>	<b>82</b>				



**Figure 2.1: Preferred Dispute Resolution Procedure according to size of contract**

## 2.3 Focus Groups

### 2.3.1 Focus group participants

Following the introductions afforded by the survey, twelve (12) organisations were invited to participate in a follow-up focus group for the purpose of confirming the survey findings and elaborating on aspects of interest. Eight of the organisations (listed in Table 2.10) agreed to the focus groups and between them provided 55 participants. All the individuals interviewed were collaborative and open, and a wide range of views and personal preferences were expressed. The titles of those interviewed were similar to those mentioned in section 2.2.1 of this report.

Each focus group was attended by two RMIT researchers, so that all aspects could be explored during the meeting. It also enabled two sets of field notes to be recorded for each of the focus groups thus ensuring adequate coverage. The field notes were transcribed and condensed into a single set of common issues listed in Appendix H.

**Table 2.10: Focus groups with number of attendees at each meeting.**

Date	Organisation	State	Number attended
9 June 2008	Department of Public Works	Queensland	9
10 June 2008	Department of Main Roads	Queensland	6
10 June 2008	John Holland	Queensland	8
12 June 2008	Leighton Contractors	New South Wales	5
13 June 2008	Brisbane City Council	Queensland	9
13 June 2008	Leighton Contractors	Queensland	6
24 July 2008	Civil Contractors Federation	Victoria	6
16 Sept. 2008	VicRoads	Victoria	6
		<b>Total Participated</b>	<b>55</b>

### 2.3.2 Issues arising from the focus groups

Some of the more frequently mentioned issues arising from the focus group interviews are listed below in no particular order. The full set of data (as appears in Appendix H) was used for analysis and derivation of the proposed practices for the *Guide*.

- Improvements in building relationships and communications between both parties. Despite the healthy state of the industry, there are still entrenched attitudes that create suspicion and adversarial attitudes;
- Concerns about the accuracy of contract documentation and a need for improved quality of project design documentation;
- Provision of sufficient information to define the scope of projects;
- Failure to allocate risks in an equitable way;
- Lack of training in practical contract management principles – as distinct from training in legal issues. Many reported that there is no formal training and development for new/younger site staff;
- No mechanisms exist both within organisations and externally to continuously improve processes using lessons learned from previous work;

- Some contractors reported good relations with clients but there was often conflict between them and consultants and sub-contractors;
- Difficulties in defining quality requirements - especially in building work;
- Tender periods should reflect the scope and complexity of project works;
- There is huge range of contract documentation in the market and every project appears to attract its own special provisions – thus causing disparities and inconsistencies in the market place;

Discomfort on the part of the contractors when the Supervisor to the Contract is a direct employee of the client.

## **2.4 Conclusion**

Chapter 2 presented the data collected through surveys and focus groups for the development of a best practice *Guide*. This data is analysed and discussed in more detail in the following chapter (3), where the themes and practices are distilled into a format that can be used in the creation of the *Guide*.

## 3 STRATEGIES FOR DISPUTE AVOIDANCE

### 3.1 Introduction

The qualitative data provided by the surveys and focus groups was transcribed and collated electronically into tables according to question and organisation numbers (Appendices C-H). This amalgamated data was then analysed using QSR NVivo software to code data into common themes for development of practices. Data saturation was deemed to have been reached within the sample as very little difference emerged between respondents or organisations. Furthermore, the focus groups served to ensure that the data collected was complete and had been correctly interpreted by the research team.

The rest of chapter 3 elaborates on the coded data identifying strategies and practices that need to be articulated within the *Guide*.

### 3.2 Identified Strategies and Practices

Table 3.1 lists the positive and negative practices, together with the suggested strategies in six categories. The categorisations of practices overlap significantly, although they have been presented in this format to allow appreciation of the diversity within the data. Amalgamation and further categorisation is provided in the next section. The coding frequency for each practice is indicated within the table. This frequency indicates the perceived importance of the practice as viewed by respondents. These frequency counts are only broadly indicative and some categories may involve double-counting. It does not however necessarily indicate actual effectiveness, although this may be inferred. The most dominant practices (by frequency count) are listed below.

- Contractually, the dominant issue is undoubtedly clarity of scope and contract;
- Early engagement, good quality documentation and well-qualified contractors were identified in the second category;
- Human factors were dominated by the skills and experience of individuals, coupled by their attitude in undertaking a project;
- Early notification and resolution of issues was noticeably dominant as a favourable practice in the day-to-day administration of the project;
- Organisationally, the factors unmistakably influential are open communication, collaboration, teamwork and relationships between parties;
- Finally, respondents identified the equitable sharing of risk as important to avoiding disputes.

**Table 3.1: Categorised strategies and examples for dispute avoidance listed by descending coding frequencies**

Strategies and Examples	Freq.	Strategies and Examples	Freq.
<b>Leadership and Organisational Culture</b>	<b>188</b>	<b>Procurement and Contract Strategy</b>	<b>156</b>
+ Good open communication between parties	35	+ Pre-tender discussion & ECI	18
+ Open constructive and collaborative approach	31	+ Share risks as appropriate to manage	13
+ Teamwork approach	22	+ Clear good quality contract documents	11
+ Build and manage relationships	20	+ Issue of good quality documentation	10
- Poor communication	12	+ Award to qualified and adequately resourced co's	9
- Aggressive attitude with no compromise approach	9	+ Discuss risks openly	9
+ Set rules for expected behaviour early	8	- Poor construction documentation	8
+ Snr management group with resolution/review role	7	- Poor contract documents	8
+ Use independent dispute resolution body	5	- Award contract on price only	7
+ Willingness to accept responsibility for errors	5	+ Use non-price selection criteria	7
- Master-servant attitude	4	- Risk 'selling' by clients	6
- Refer all matters in writing through official channels	4	+ Guidance on procurement and contract selection	5
+ High level of trust between parties	4	+ Shared understanding of deliverables	5
- Lack of relationship	3	+ Use standard contract	5
- Lack of support and understanding of other party	3	- Assumed all risks taken by contractor	4
+ Proactive approach to the project by the client	3	+ Award tenders to 'aligned' companies	4
+ Honesty	2	- Conflicting contracts (with main contract)	3
- Authority and communication lines unclear	1	+ Adopt appropriate delivery method	3
- Inflexible attitude	1	+ Establish effective tender evaluation processes	3
- Lack of trust	1	- Absence of reasonable latent conditions clause	2
- Micro-management by principal	1	- Poor understanding of scope and goals	2
- Political drivers of the project	1	- Unfair conditions of contract that are one-sided	2
- Self-interest	1	- Award contract on relationship not ability	1
- Superintendent's lack of independence	1	- Lack of emphasis on performance criteria	1
- Unwilling to share responsibility	1	- Lack of experience or competence for the works	1
+ Dissociate designers & client representatives' roles	1	- Time restrictions for reasonable claims	1
+ Mutual respect	1	- Unapproved changes by contractors	1
+ Shield project from third parties	1	- Under-priced tender	1
		+ Agree rates for variations	1
		+ Do not time-bar claims	1
<b>Project Management Process and Administration</b>	<b>90</b>	+ Agreement of contracts with main contract	1
+ Early notification & resolution of issues & disputes	27	+ Create performance incentives	1
- Excessive, dubious or aggressive claiming	9	+ Effective pre-qualification system	1
- Compliance approach towards contract staff	6	+ More client participation in tender	1
- Indecision by parties with late/slow agreement	6		
+ Pay claims/invoices expeditiously	6	<b>Planning and Design</b>	<b>30</b>
- Failure to administer contract adequately	4	+ Clearly defined project scope	14
- Insufficient resources to complete the project	4	- Poorly defined project scope with changes	7
- Poor sub-contractor documents and processes	4	- Contractor takes-on incomplete design	2
- Refer all matters in writing through official channels	4	+ Adequate investment at design stage	2
- Use contract for protection and leverage	4	+ Setting reasonable timeframe and budget	2
- Non-resolution of issues	3	- Capped budget of client drives behaviour	1
- Inadequate staff to administer contract by client	2	- Poor constructability in designs	1
- Unreasonable/slow response to legitimate claims	2	- Unrealistic project program	1
+ Continue works while issues resolved	2		
- Lack of documented precedent for decisions	1	<b>Human Factors and Skills</b>	<b>36</b>
+ Continual review of programme and method	1	- Incompetence or inexperience of project personnel	10
+ Ensure sufficient resources for the project	1	+ Legal/contract administration training	7
+ 'Give & take' approach to negotiation of issues	1	+ Skilled personnel with adequate training	7
+ Management support of project decisions made	1	- Change of key personnel or high staff turnover	3
+ Provide claims entitlement guidance to teams	1	- Lack of mentoring for young engineers	2
+ Strong decisive leadership	1	+ Change personnel as necessary	2
		+ Consistent personnel	2
		+ Establish community of practice to train	2
		- Personalisation of disputes	1

**Note: a positive sign indicates a good practice and a negative sign, bad practice.**

### 3.3 Suggested Strategies and Practices

The categorised strategies and examples for dispute avoidance listed in Table 3.1 were re-arranged into broad strategy groups and broadly ranked according coding frequency. The frequency measures are a crude measure of significance.

**Table 3.2: Leadership and organisational culture - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Broad strategies	Rank	Supporting coded practices
Foster a collaborative, open and constructive team approach	Very High 92	+ Open constructive and collaborative approach + Teamwork approach + Build and manage relationships - Superintendent's lack of independence + Willingness to accept responsibility for errors - Master-servant attitude - Lack of relationship + Proactive approach to the project by the client - Self-interest - Unwilling to share responsibility + Dissociate designers and client representatives' roles
Foster open communication between all parties	Very High 49	+ Good open communication between parties - Poor communication - Refer all matters in writing through official channels
Encourage and foster mutually respectful and honest behaviour	High 21	- Aggressive attitude with no compromise approach + High level of trust between parties + Honesty - Inflexible attitude - Lack of trust + Mutual respect - Lack of support and understanding for the other party
Establish a senior management resolution and review body	Med 12	+ Snr management group with resolution/review role + Use independent dispute resolution body
Establish rules and expected behaviour early	Med 8	+ Set rules for expected behaviour early
Allow parties to manage their projects adequately without external interference	Low 3	- Political drivers of the project + Shield project from third parties - Micro-management by principal
Clarify and establish lines of authority and communication	Low 1	- Authority and communication lines unclear

**Table 3.3: Planning and Design - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Broad strategies	Rank	Supporting coded practices
Develop a clear scope for the project	High 21	+ Clearly defined project scope - Poorly defined project scope with changes
Invest adequately in the design stage of the project, including addressing constructability	Low 5	- Contractor takes-on incomplete design + Adequate investment at design stage - Poor constructability in designs
Ensure the timeframe and budget are adequate for the scope	Low 4	+ Setting reasonable timeframe and budget - Unrealistic project program - Capped budget of client drives behaviour

**Table 3.4: Procurement and Contract Strategy - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Practice or Strategy	Rank	Supporting coded practices
Allocate risks to those best placed to manage them	High 32	+ Share risks as appropriate to manage - Risk 'selling' by clients - Assumed all risks taken by contractor + Discuss risks openly
Use clear standard contracts and terms	High 28	+ Use standard contract - Conflicting contracts (with main contract) + Agreement of contracts with main contract - Poor contract documents + Clear good quality contract documents
Develop broad selection criteria (including non-price) and effective tender evaluation process	High 23	- Award contract on relationship not ability + Establish effective tender evaluation processes + Award tenders to 'aligned' companies + Use non-price selection criteria - Under-priced tender - Award contract on price only
Issue good quality documentation for tendering and contract	High 18	+ Issue of good quality documentation - Poor construction documentation
Notify and involve contractors early – in the pre-tender stage of the project process	High 18	+ Pre-tender discussion and early contractor involvement + More client participation in tender
Pre-qualify and select preferred contractors	Med 11	+ Award to qualified and adequately resourced companies + Effective pre-qualification system - Lack of experience or competence for the works
Select an appropriate procurement contract approach	Med 8	+ Guidance on procurement and contract selection + Adopt appropriate delivery method
Ensure there is a shared understanding of the project scope and deliverables	Med 7	+ Shared understanding of deliverables - Poor understanding of scope and goals
Contracts should contain fair conditions including the equitable handling of claims	Med 6	- Absence of reasonable latent conditions clause - Unfair conditions of contract that are one-sided - Time restrictions for reasonable claims + Do not time-bar claims
Establish clear policies for scope or project variations and agree rates	Low 2	+ Agree rates for variations - Unapproved changes by contractors
Create performance incentives beyond cost only	Low 2	+ Create performance incentives - Lack of emphasis on non-cost/time project performance criteria

**Table 3.5: Project management process and administration - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Practice or Strategy	Rank	Supporting coded practices
Ensure early notification and resolution of issues and disputes	High 32	+ Early notification & resolution of issues & disputes + Continue works while issues resolved - Non-resolution of issues
Administer contracts reasonably and adequately	High 20	- Compliance approach towards contract staff - Refer all matters in writing through official channels + 'Give & take' approach to negotiation of issues - Failure to administer contract adequately - Use contract for protection and leverage
Deal with claims in a positive and timely manner	High 17	- Excessive, dubious or aggressive claiming + Pay claims/invoices expeditiously - Unreasonable and slow response to legitimate claims
Make timely decisions that impact other parties	High 12	- Indecision by parties with late/slow agreement + Management support of project decisions made + Strong decisive leadership
Allocate sufficient resources to complete the project as agreed	Med 7	- Insufficient resources to complete the project - Inadequate staff to administer contract by client + Ensure sufficient resources for the project
Keep adequate records and establish processes	Low 4	- Poor sub-contractor documents and processes
Establish common procedures and responses to contractual issues	Low 2	+ Provide claims entitlement guidance to teams - Lack of documented precedents for contractual decisions
Continually review program and methods across the team	Low 1	+ Continual review of programme and method

**Table 3.6: Human factors and skills - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Broad strategies	Rank	Supporting coded practices
Engage in development and training of personnel	High 28	- Incompetence or inexperience of project personnel + Establish community of practice to train - Lack of mentoring for young engineers + Legal/contract administration training + Skilled personnel with adequate training
Encourage stable adequately skilled project teams	Med 7	- Change of key personnel or high staff turnover + Change personnel as necessary + Consistent personnel
Discourage personalisation of disagreements and disputes	Low 1	- Personalisation of disputes

### 3.4 Conclusion

This chapter presented the data collected for the production of the *Guide*. The survey and focus group data was analysed by coding associated practices into themes. The themes were further refined into a set of strategies for dispute avoidance. These are carried forward into the next chapter where a set of guiding strategies were developed for the *Guide*.

## **4 THE GUIDE TO DISPUTE AVOIDANCE AND RESOLUTION**

### **4.1 Introduction**

Chapter 3 analysed the data from the workshops and surveys, presenting a series of positive and negative practices from which to develop practices for the *Guide*. This chapter suggests some guiding practices derived from the analysis of the previous chapter. Although the suggested practices cover most aspects yielded by the analysis, a few more will be added to the final Guide based on experiences of the project team, feedback and other report developed by the project team.

### **4.2 Suggested Dispute Avoidance strategies**

Table 4.1 to Table 4.5 list suggested ‘Dispute Avoidance and Resolution strategies’ (DARs) within the five headings retained from the previous chapter. The tables demonstrate the link between the coded practices of the data, the broad strategies and the suggested DARs.

**Table 4.1: Leadership and organisational culture - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Broad strategies	Supporting coded practices	Suggested Dispute Avoidance and Resolution strategies
Foster a collaborative, open and constructive team approach	+ Open constructive and collaborative approach	<b>1.1</b> Chief executives and senior managers to drive cultural change to foster collaborative approach to project management <b>1.2</b> Owner/designer to be continuously engaged during the project duration to ensure its needs are being met and to seek feedback to ensure that needs are met <b>1.3</b> Contracting strategies to be more collaborative rather than dictatorial <b>1.4</b> All participants to take a proactive role in project safety management <b>1.5</b> Appoint an experienced, independent Superintendent <b>1.6</b> Promote and entrench good contracting practices in industry <b>1.7</b> Apply lessons learned from previous projects <b>1.8</b> Continuously review performance
	+ Teamwork approach	
	+ Build and manage relationships	
	- Superintendent's lack of independence	
	+ Willingness to accept responsibility for errors	
	- Master-servant attitude	
	- Lack of relationship	
	+ Proactive approach to the project by the client	
	- Self-interest	
	- Unwilling to share responsibility	
+ Dissociate designers and client representatives' roles		
Foster open communication between all parties	+ Good open communication between parties	<b>1.9</b> All parties to jointly develop a project communications plan <b>1.10</b> Encourage and support staff in sharing problem solving <b>1.11</b> Conduct toolbox meetings on issues
	- Poor communication	
	- Refer all matters in writing through official channels	
Encourage and foster mutually respectful and honest behaviour	- Aggressive attitude with no compromise approach	<b>1.12</b> Conduct collaborative team-building programs based on a philosophy of best for project <b>1.13</b> Acknowledge good team performance <b>1.14</b> Provide training in relationship – building <b>1.15</b> Appoint people who are "right" for the task
	+ High level of trust between parties	
	+ Honesty	
	- Inflexible attitude	
	- Lack of trust	
	+ Mutual respect	
- Lack of support and understanding for the other party		
Establish a senior management resolution and review body	+ Snr management group with resolution/review role	<b>1.16</b> Issues which can't be resolved at site level to be referred to senior executives or independent body
	+ Use independent dispute resolution body	
Establish rules and expected behaviour early	+ Set rules for expected behaviour early	<b>1.17</b> Jointly develop a project code of behaviour to be signed off by all parties
Allow parties to manage their projects adequately without external interference	- Political drivers of the project	<b>1.18</b> Encourage site staff to seek solutions <b>1.19</b> Only bring in lawyers as a last resort
	+ Shield project from third parties	
	- Micro-management by principal	
Clarify and establish lines of authority and communication	- Authority and communication lines unclear	<b>1.20</b> Insure all people have clear levels of delegation of authority <b>1.21</b> Refer to communications plan (above)

**Table 4.2: Planning and Design - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Broad strategies	Supporting coded practices	Suggested Dispute Avoidance and Resolution strategies
Develop a clear scope for the project	+ Clearly defined project scope	<b>2.1</b> Clearly define the scope of the project in the contract documentation and confirm it at pre-tender meetings <b>2.2</b> Confirm all queries at the tender stage clearly and expeditiously
	- Poorly defined project scope with changes	
Invest adequately in the design stage of the project, including addressing constructability	- Contractor takes-on incomplete design	<b>2.3</b> Ensure that constructability is taken into account in design through consultation with builders and specialist subcontractors <b>2.4</b> Ensure design is complete <b>2.5</b> Ensure a professional standard of contract documentation <b>2.6</b> Check critical aspects of design to minimise rework <b>2.7</b> Treat any unresolved design details at the time of tender, fairly and clearly <b>2.8</b> Use integrated digital models to test the design and constructability, providing opportunities for design optimisation through performance testing, clash detection, simulations and cost control.
	+ Adequate investment at design stage	
	- Poor constructability in designs	
Ensure the timeframe and budget are adequate for the scope	+ Setting reasonable timeframe and budget	<b>2.9</b> Set a reasonable contract period taking into account any degree of difficulty, location and climatic influences
	- Unrealistic project program	
	- Capped budget of client drives behaviour	

**Table 4.3: Procurement and contract strategy - broad strategies for dispute avoidance identified from the surveys and focus groups.**

Practice or Strategy	Supporting coded practices	Suggested Dispute Avoidance and Resolution strategies
Allocate risks to those best placed to manage them	+ Share risks as appropriate to manage	<b>3.1</b> Prior to tendering, work with stakeholders to identify risks and allocate them reasonably <b>3.2</b> Clearly define risk allocation in the contract documentation <b>3.3</b> Conduct a risk management workshop early in the project to assist in managing or mitigating risks
	- Risk 'selling' by clients	
	- Assumed all risks taken by contractor	
	+ Discuss risks openly	
Use clear standard contracts and terms	+ Use standard contract	<b>3.4</b> Use standard and consistent contract documentation <b>3.5</b> Adopt same standards for sub-contracts as for the head contract <b>3.6</b> Proof check contract documentation
	- Conflicting contracts (with main contract)	
	+ Agreement of contracts with main contract	
	- Poor contract documents	
	+ Clear good quality contract documents	
Develop broad selection criteria (including non-price) and effective tender evaluation process	- Award contract on relationship not ability	<b>3.7</b> Consider use of other relevant evaluation criteria rather than price only
	+ Establish effective tender evaluation processes	
	+ Award tenders to 'aligned' companies	
	+ Use non-price selection criteria	
	- Under-priced tender	
	- Award contract on price only	
Issue good quality documentation for tendering and contract	+ Issue of good quality documentation	<b>3.8</b> Adopt highest industry standards in quality of documentation <b>3.9</b> Undertake independent proof check <b>3.10</b> Utilise Integrated digital modelling
	- Poor construction documentation	
Notify and involve contractors early – in the pre-tender stage of the project process	+ Pre-tender discussion and early contractor involvement	<b>3.11</b> Foster partnership approach with industry to inform contractors of future project requirements and to gain feedback for continuous improvement
	+ More client participation in tender	
Pre-qualify and select preferred contractors	+ Award to qualified and adequately resourced companies	<b>3.12</b> Adopt appropriate pre-qualification procedures including value for money criteria <b>3.13</b> Undertake post-project assessment of contractor's performance and review its pre-qualification status
	+ Effective pre-qualification system	
	- Lack of experience or competence for the works	
Select an appropriate procurement contract approach	+ Guidance on procurement and contract selection	<b>3.14</b> Adopt a contract strategy to best match the needs of the project
	+ Adopt appropriate delivery method	
Ensure there is a shared understanding of the project scope and deliverables	+ Shared understanding of deliverables	<b>3.15</b> Conduct pre-tender meetings to clarify scope and deliverables and to consider feedback from the industry
	- Poor understanding of scope and goals	
Contracts should contain fair conditions including the equitable handling of claims	- Absence of reasonable latent conditions clause	<b>3.16</b> Use provisional sums or quantities for works not clearly defined <b>3.17</b> Ensure that third party requirements are incorporated in documentation
	- Unfair conditions of contract that are one-sided	
	- Time restrictions for reasonable claims	
	+ Do not time-bar claims	
Establish clear policies for scope or project variations and agree rates	+ Agree rates for variations	<b>3.18</b> Request the submission of typical day labour rates in tenders as the basis for negotiation
	- Unapproved changes by contractors	
Create performance incentives beyond cost only	+ Create performance incentives	<b>3.19</b> Consider the merit of performance incentives in contracts
	- Lack of emphasis on non-cost/time project performance criteria	

**Table 4.4: Project management process and administration - broad strategies for dispute avoidance identified from the surveys and focus groups.**

<b>Practice or Strategy</b>	<b>Supporting coded practices</b>	<b>Suggested Dispute Avoidance and Resolution strategies</b>
Ensure early notification and resolution of issues and disputes	+ Early notification & resolution of issues & disputes	4.1 Provide early notification of potential issues
	+ Continue works while issues resolved	
	- Non-resolution of issues	
Administer contracts reasonably and adequately	- Compliance approach towards contract staff	4.2 Consider the impact of the issue in question from the other side's perspective and collaboratively work towards lessening the impact
	- Refer all matters in writing through official channels	
	+ 'Give & take' approach to negotiation of issues	4.3 Consider any possible "trade offs" taking into account the contractor's best endeavours to avoid/mitigate the issue
	- Failure to administer contract adequately	
	- Use contract for protection and leverage	
Deal with claims in a positive and timely manner	- Excessive, dubious or aggressive claiming	4.4 Issue certificates expeditiously
	+ Pay claims/invoices expeditiously	
	- Unreasonable and slow response to legitimate claims	
Make timely decisions that impact other parties	- Indecision by parties with late/slow agreement	4.5 Treat issues immediately they arise
	+ Management support of project decisions made	
	+ Strong decisive leadership	
Allocate sufficient resources to complete the project as agreed	- Insufficient resources to complete the project	4.6 Resolve issues and make decisions in a timely manner to avoid ongoing uncertainty
	- Inadequate staff to administer contract by client	
	+ Ensure sufficient resources for the project	
Keep adequate records and establish processes	- Poor sub-contractor documents and processes	4.7 Provide sufficient and appropriate resources to complete the project within the contract period
		4.8 Monitor progress and adjust resource allocation if necessary
Establish common procedures and responses to contractual issues	+ Provide claims entitlement guidance to teams	4.9 Maintain thorough records on site
	- Lack of documented precedents for contractual decisions	
Continually review program and methods across the team		4.10 Regularly agree on as-built records
	+ Continual review of programme and method	4.11 Use lessons learned from other projects to assist in application of consistent standards
		4.12 Continuously review performance

**Table 4.5: Human factors and skills - broad strategies for dispute avoidance identified from the surveys and focus groups.**

<b>Broad strategies</b>	<b>Supporting coded practices</b>	<b>Suggested Dispute Avoidance and Resolution strategies</b>
Engage in development and training of personnel	- Incompetence or inexperience of project personnel	5.1 Appoint experienced project management staff with track records of team participation
	+ Establish community of practice to train	5.2 Induct and train less experienced staff
	- Lack of mentoring for young engineers	5.3 Senior staff to mentor less experienced staff
	+ Legal/contract administration training	5.4 Undertake refresher training in contract management
	+ Skilled personnel with adequate training	
Encourage stable adequately skilled project teams	- Change of key personnel or high staff turnover	5.5 Ensure that the right people are appointed to tasks
	+ Change personnel as necessary	5.6 Keep successful teams together
	+ Consistent personnel	
Discourage personalisation of disagreements and disputes	- Personalisation of disputes	5.7 Provide staff experienced in negotiation and collaborative problem solving

### **4.3 Proposed Principles and Practices for ‘The Guide’**

The suggested Dispute Avoidance and Resolution strategies (DARs) developed in section 4.2 are simply re-stated in a distilled manner within this section (Table 4.6 to Table 4.8). Table 4.9 envisages the type of information that each DARs will have associated with it in the *Guide*. This information provides sufficient detail for the DARs to be understood, planned, implemented, monitored and measured. These suggestions provide a framework for creating the *Guide*, once associated work by Curtin and the project members is consulted.

**Table 4.6: A framework of principles, strategies and DARs for the creation of the Guide.**

Principle	Broad strategies	Suggested Dispute Avoidance and Resolution strategies
<b>Demonstrate leadership in construction contracts</b>	Foster a collaborative, open and constructive team approach	<p><b>1.22</b> Chief executives and senior managers to drive cultural change to foster collaborative approach to project management</p> <p><b>1.23</b> Owner/designer to be continuously engaged during the project duration to ensure its needs are being met and to seek feedback to ensure that needs are met</p> <p><b>1.24</b> Contracting strategies to be more collaborative rather than dictatorial</p> <p><b>1.25</b> All participants to take a proactive role in project safety management</p> <p><b>1.26</b> Appoint an experienced, independent Superintendent</p> <p><b>1.27</b> Promote and entrench good contracting practices in industry</p> <p><b>1.28</b> Apply lessons learned from previous projects</p> <p><b>1.29</b> Continuously review performance</p>
	Foster open communication between all parties	<p><b>1.30</b> All parties to jointly develop a project communications plan</p> <p><b>1.31</b> Encourage and support staff in sharing problem solving</p> <p><b>1.32</b> Conduct toolbox meetings on issues</p>
	Encourage and foster mutually respectful and honest behaviour	<p><b>1.33</b> Conduct collaborative team-building programs based on a philosophy of best for project</p> <p><b>1.34</b> Acknowledge good team performance</p> <p><b>1.35</b> Provide training in relationship – building</p> <p><b>1.36</b> Appoint people who are “right” for the task</p>
	Establish a senior management resolution and review body	<p><b>1.37</b> Issues which can’t be resolved at site level to be referred to senior executives or independent body</p>
	Establish rules and expected behaviour early	<p><b>1.38</b> Jointly develop a project code of behaviour to be signed off by all parties</p>
	Allow parties to manage their projects adequately without external interference	<p><b>1.39</b> Encourage site staff to seek solutions</p> <p><b>1.40</b> Only bring in lawyers as a last resort</p>
	Clarify and establish lines of authority and communication	<p><b>1.41</b> Insure all people have clear levels of delegation of authority</p> <p><b>1.42</b> Refer to communications plan (above)</p>

**Table 4.7: A framework of principles, strategies and DARs for the creation of the *Guide* (continued).**

<b>Principle</b>	<b>Broad strategies</b>	<b>Suggested Dispute Avoidance and Resolution strategies</b>
<b>Confirm project needs</b>	Develop a clear scope for the project	<b>2.1</b> Clearly define the scope of the project in the contract documentation and confirm it at pre-tender meetings <b>2.2</b> Confirm all queries at the tender stage clearly and expeditiously
	Invest adequately in the design stage of the project, including addressing constructability	<b>2.3</b> Ensure that constructability is taken into account in design through consultation with builders <b>2.4</b> Ensure design is complete <b>2.5</b> Ensure a professional standard of contract documentation <b>2.6</b> Check critical aspects of design to minimise rework <b>2.7</b> Treat any unresolved design details at the time of tender, fairly and clearly <b>2.8</b> Use integrated digital models to test the design and constructability, providing opportunities for design optimisation through performance testing, clash detection, simulations and cost control.
	Ensure the timeframe and budget are adequate for the scope	<b>2.9</b> Set a reasonable contract period taking into account any degree of difficulty, location and climatic influences
<b>Develop a contract strategy and allocate risk appropriately</b>	Allocate risks to those best placed to manage them	<b>3.1</b> Prior to tendering, work with stakeholders to identify risks and allocate them reasonably <b>3.2</b> Clearly define risk allocation in the contract documentation <b>3.3</b> Conduct a risk management workshop early in the project to assist in managing or mitigating risks
	Use clear standard contracts and terms	<b>3.4</b> Use standard and consistent contract documentation <b>3.5</b> Adopt same standards for sub-contracts as for the head contract <b>3.6</b> Proof check contract documentation
	Develop broad selection criteria (including non-price) and effective tender evaluation process	<b>3.7</b> Consider use of other relevant evaluation criteria rather than price only
	Issue good quality documentation for tendering and contract	<b>3.8</b> Adopt highest industry standards in quality of documentation <b>3.9</b> Undertake independent proof check <b>3.10</b> Utilise Integrated digital modelling
	Notify and involve contractors early – in the pre-tender stage of the project process	<b>3.11</b> Foster partnership approach with industry to inform contractors of future project requirements and to gain feedback for continuous improvement
	Pre-qualify and select preferred contractors	<b>3.12</b> Adopt appropriate pre-qualification procedures including value for money criteria <b>3.13</b> Undertake post-project assessment of contractor's performance and review its pre-qualification status
	Select an appropriate procurement contract approach	<b>3.14</b> Adopt a contract strategy to best match the needs of the project
	Ensure there is a shared understanding of the project scope and deliverables	<b>3.15</b> Conduct pre-tender meetings to clarify scope and deliverables and to consider feedback from the industry
	Contracts should contain fair conditions including the equitable handling of claims	<b>3.16</b> Use provisional sums or quantities for works not clearly defined <b>3.17</b> Ensure that third party requirements are incorporated in documentation
	Establish clear policies for scope or project variations and agree rates	<b>3.18</b> Request the submission of typical day labour rates in tenders as the basis for negotiation
	Create performance incentives beyond cost only	<b>3.19</b> Consider the merit of performance incentives in contracts

**Table 4.8: A framework of principles, strategies and DARs for the creation of the *Guide* (continued).**

<b>Principle</b>	<b>Practice or Strategy</b>	<b>Suggested Dispute Avoidance and Resolution strategies</b>
<b>Manage projects professionally</b>	Ensure early notification and resolution of issues and disputes	<b>4.1</b> Provide early notification of potential issues
	Administer contracts reasonably and adequately	<b>4.2</b> Consider the impact of the issue in question from the other side's perspective and collaboratively work towards lessening the impact <b>4.3</b> Consider any possible "trade offs" taking into account the contractor's best endeavours to avoid/mitigate the issue <b>4.4</b> Issue certificates expeditiously
	Deal with claims in a positive and timely manner	<b>4.5</b> Treat issues immediately they arise
	Make timely decisions that impact other parties	<b>4.6</b> Resolve issues and make decisions in a timely manner to avoid ongoing uncertainty
	Allocate sufficient resources to complete the project as agreed	<b>4.7</b> Provide sufficient and appropriate resources to complete the project within the contract period <b>4.8</b> Monitor progress and adjust resource allocation if necessary
	Keep adequate records and establish processes	<b>4.9</b> Maintain thorough records on site <b>4.10</b> Regularly agree on as-built records
	Establish common procedures and responses to contractual issues	<b>4.11</b> Use lessons learned from other projects to assist in application of consistent standards
	Continually review program and methods across the team	<b>4.12</b> Continuously review performance
<b>Develop people in good practices</b>	Engage in development and training of personnel	<b>5.8</b> Appoint experienced project management staff with track records of team participation <b>5.9</b> Induct and train less experienced staff <b>5.10</b> Senior staff to mentor less experienced staff <b>5.11</b> Undertake refresher training in contract management
	Encourage stable adequately skilled project teams	<b>5.12</b> Ensure that the right people are appointed to tasks <b>5.13</b> Keep successful teams together
	Discourage personalisation of disagreements and disputes	<b>5.14</b> Provide staff experienced in negotiation and collaborative problem solving

Table 4.9 illustrates a proposed information panel that will be associated with each DARs in the *Guide*. The information provided will aid organisation to fully understand the point of the strategy, what it aims to achieve, how it can be measured and who would typically lead its implementation. Each DARs in the *Guide* will have a similar information panel.

**Table 4.9: Sample information panel for one DARs.**

<b>DARs 5.9</b>	<b>Induct and train less experienced staff</b>
<b>Strategy</b>	All staff engaged in contract management will be inducted into each project to ensure that the obligations and rights of each party to the contract are appreciated and understood. Refresher training in contract issues should be undertaken regularly to keep staff abreast of emerging contract management issues and the latest contract procurement and management techniques.
<b>Description</b>	<p>Induction should be undertaken by senior contract management staff within the organisation. It provides:</p> <ul style="list-style-type: none"> <li>▪ an opportunity for site staff to hear from senior managers,</li> <li>▪ increases awareness of corporate policies, practices, guidelines, QA requirements, standard forms and check lists</li> <li>▪ information on delegation of responsibilities,</li> <li>▪ reinforcement of contract management procedures and processes, and</li> <li>▪ an opportunity for inductees to ask questions to expand their knowledge.</li> </ul> <p>Inductees may be provided with new starter's kits to assist them in their tasks. They could also be provided with copies of manuals, procedures, standard forms and check lists, and the contact details of officers who can provide assistance and advice.</p> <p>Induction is especially important for inexperienced/new staff. For these people, it may be useful to undertake a series of brief workshops – say monthly – to check their understandings and to clarify any uncertainties they may have.</p> <p>Refresher training should be delivered, preferably, by independent, third party providers. This training should be broad-ranging and include case studies. It could include aspects such as:</p> <ul style="list-style-type: none"> <li>▪ contract strategies for different types of works</li> <li>▪ project management tools</li> <li>▪ levels of delegation</li> <li>▪ standard contracts for minor works and major works</li> <li>▪ types and forms of contracts</li> <li>▪ occupational health and safety</li> <li>▪ procedures for bidding, opening of tenders and contract award</li> <li>▪ standard documents for procurement of works, goods and services</li> <li>▪ reporting systems</li> <li>▪ quality assurance and quality control requirements</li> <li>▪ probity</li> <li>▪ prequalification and short-listing of contractors</li> <li>▪ contract claims management</li> <li>▪ contract administration</li> </ul> <p>The purpose of the refresher training is to keep staff aware of the latest issues regarding contract procurement and management techniques.</p>
<b>Key Benefits</b>	<ul style="list-style-type: none"> <li>▪ All contract management staff will have an increased awareness of their responsibilities under the contract,</li> <li>▪ A shared vision across the organisation on contract management duties and responsibilities,</li> <li>▪ More certainty in the market place through the even application of contract management standards, and</li> <li>▪ Staff members are kept informed of new processes and techniques in contract management.</li> </ul>
<b>Desirable Outcomes</b>	<ul style="list-style-type: none"> <li>▪ Openly demonstrates the organisation's commitment to best practice in contract management,</li> <li>▪ Communicates information through the organisation about the importance of transparent, fair and non-discriminatory contract practices which lead to more certainty in industry,</li> <li>▪ Raises standards in contract management,</li> <li>▪ Clarifies roles and responsibilities of individuals and organisations, and</li> <li>▪ Articulates contract management objectives.</li> </ul>
<b>Performance Measure</b>	<ul style="list-style-type: none"> <li>▪ Records of induction and training programs in contract management, and</li> <li>▪ Human Resource Management plans to ensure that appropriate staff are inducted and refreshed in contract management.,</li> </ul>
<b>Leadership</b>	<ul style="list-style-type: none"> <li>▪ All organisations participating in a contract.</li> </ul>
<b>Materials</b>	<ul style="list-style-type: none"> <li>▪ TBD</li> </ul>

## 4.4 Achievement of Objectives

The objectives of this strand of the project undertaken by RMIT University are detailed in Section 1.2 of this report. The objectives have been partially addressed in this research report as follows:

- ***Underlying principles*** – these have been firmly established through the analysis of the survey and focus group data and the development of broad strategies and suggested principles (Sections 4.2 and 4.3);
- ***Ascertain proactive dispute avoidance strategies*** – these have been established through the data and presented in various formats and tables throughout Sections 3.1 through 4.3;
- ***Ascertain dispute resolution strategies*** – data has been collected through the survey on preferred dispute resolution strategies of the sample group. Most information for this objective will be obtained from materials already published, supplemented by the newly developed DARs;
- ***Provide case examples*** – numerous vignettes of case studies illustrating best practice were recorded during the focus groups, and will be elaborated on during the production of the *Guide*;
- ***Articulate findings into a practical ‘guide to best practice’*** – a suggested range of principles and DARs have been developed as a framework for developing a *Guide* (Sections 4.2 and 4.3).

# Appendix A – CLIENT QUESTIONNAIRE

## AVOIDANCE OF DISPUTES IN CONSTRUCTION CONTRACTS

### QUESTIONNAIRE FOR CLIENTS

#### Preamble

RMIT University (RMIT) as a participant of the Cooperative Research Centre for Construction Innovation (CRC) in developing guidelines for the avoidance of contract disputes in Australia's construction industry. This project will be overseen by an independent steering committee of industry experts chaired by Graeme Peck.

In order to develop these guidelines, we are seeking qualitative and quantitative data from construction industry clients and contractors so that we can develop guidelines which deal with the industry's expectations by addressing the real problems.

Our methodology is to distribute this questionnaire electronically to industry participants with the request that it be completed as far as possible and returned electronically to the sender by 12 May 2008. All information submitted by organisations or individuals will remain strictly confidential and the identity of organisations or individuals submitting information will not be revealed without the prior approval of the organisation or individual concerned. All information received from participants will be collated and analyzed to inform and direct the overall development of the guidelines.

Following collation and analysis of the data, we will arrange interviews or workshops with participants to further examine emerging themes and collaborate in developing appropriate guidelines.

Draft guidelines will be distributed to all participants for comment and modification before finalisation and endorsement by the CRC.

#### Data Required

We are seeking information on the following topics:

- **The scope and types of contracts.** We need to appreciate the types of contracts and contracting strategies in use and their scope or size in monetary terms.
- **The sources of disputes.** We need to know these in order to design appropriate strategies to avoid disputes developing at the sources. We have divided the sources into three contributing factors – contractual, human and external.
- **Examples or case studies of good practice and bad practice.** We want to know why some construction contracts ran smoothly and why others were problematic.
- **Suggested strategies for avoidance of disputes.** We are interested to explore further any remedies that participants already have in mind to avoid disputes. We want to learn about proactive and innovative ways to deal with issues before they evolve into formal disputes.

- **Preferred dispute resolution processes.** Although dispute resolution is not a part of our assignment, we are mindful that inappropriate resolution procedures may themselves be the cause of a dispute and lead to escalation or worsening of disputes. We want to get an idea of the industry's preferences so that the guidelines can deal with these – if appropriate.

## SECTION 1: SCOPE AND TYPES OF CONTRACTS

There are numerous types of contracts in use in the construction industry but the three main models can be summarized thus:

**Traditional** – where the client undertakes the planning and engages a designer to carry out the design and a constructor to build the facility/structure. Sometimes the client has the technical capability to undertake the design. These contracts may be either lump sum or schedule of rates. Cost plus contracts also come within this type but they are less common.

**Design and Construct** – where the client undertakes the initial planning and engages a consortium of a designer and a constructor to design and build the facility/structure.

**Collaborative** – where the client forms an alliance with the designer and the constructor to plan, design and build the facility/structure. These types of contracts are usually referred to as alliance contracts.

Many major projects are now being undertaken as Private Public Partnerships sometimes known as PPPs. These can take many forms such as Build, Own, Operate and Transfer (BOOT), Build, Operate and Transfer (BOT) and Design Build and Operate (DBO). However these projects usually employ variations and combinations of the three types mentioned above.

### 1.1 Scope of Projects

What percentage of your projects, by value, fall within the following ranges?

Monetary Value in \$ millions	Percentage of Total Portfolio
Up to \$20 million	
\$20 million to \$50 million	
\$50 million to \$200 million	
Over \$200 million	
Total	100%

### 1.2 Numbers of Current Contracts

How many contracts within this scope are you currently conducting?

Monetary Value in \$ millions	Numbers of Current Contracts
Up to \$20 million	
\$20 million to \$50 million	
\$50 million to \$200 million	
Over \$200 million	
Total	

### 1.3 Types of Contracts

Of the numbers of contracts that you are currently conducting, how many fall within the major project types?

<b>Types of Contracts</b>	<b>Numbers of Current Contracts</b>
Traditional	
Design and Construct	
Collaborative	

### 1.4 Other types of Contracts

Are there any other types of contracts you are currently conducting? If so, what types are they? Please provide particulars.

### 1.5 Nature of Works Carried Out

Please provide a general description of the nature of the works carried out under your contracts e.g. buildings, roads, bridges, water/sewerage works etc.

## SECTION 2: SOURCES OF DISPUTES

### 2.1 From a Client's Perspective

In order to appreciate the main causes of disputes, we want you – as a client awarding contracts to contractors – to nominate the dispute causes most common in your experience. We want to know two aspects – the frequency of a cause and its impact. We want you to rate these from high (H), medium (M) or low (L) with the most frequent and the highest impact being H and the lowest, L. If you wish to add other sources not listed here, please do so by expanding the table.

Sources of Disputes	Frequency			Impact		
	High	Med	Low	High	Med	Low
<b>Contractual Factors</b>						
Non-performance in quality						
Non-performance in schedule/program						
Exaggerated claims						
Excessive claims						
Unrealistic pricing at time of tender						
Estimating errors where contractor is responsible for taking out quantities						
Failure to implement safety plans						
Failure to submit required details expeditiously						
Failure to provide sufficient resources or equipment for the project						
Persistent errors in work						
Incompetent subcontractors						
Failure to manage sub-contractors						
Manufacturing claims in order to increase revenue						
Not proceeding with work when a dispute arises						
Lack of a Quality Management Plan						
Differences in the interpretation of contract requirements						
Differences in treating latent conditions						
<b>Human Factors</b>						
Incompetence of contractor's management staff						
Inflexibility and intransigence of contractor's staff to understand the client's position						
Adversarial attitude of contractor's staff						
Lack of communications						
Contractor's staff not sufficiently trained in contract management						
Reactive rather than proactive approach to dispute resolution						
No sense of a team approach						
<b>External Factors</b>						
Latent conditions						
Excessive bad weather						
Industrial actions						
Uncontrollable external events						
Political interference						

## 2.2 From a Contractor's Perspective

We now want you to put yourself in the position of a contractor and rate what you think might be a fair assessment of the frequency and impact of a client's performance in contributing to contract disputes.

Sources of Disputes	Frequency			Impact		
	High	Med	Low	High	Med	Low
<b>Contractual Factors</b>						
Unrealistic expectations of the client for quality						
Unrealistic expectations of the client for schedule/program						
Unusual, non-standard or changed General Conditions of Contract						
Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents						
Unrealistic and difficult to construct designs						
Estimating errors where client is responsible for taking out quantities						
Slow client responses to queries and approval requests						
Inappropriate type of contract for the nature and scope of works						
Failure to provide sufficient resources or equipment for the project						
Post-contract changes to design details or the scope of work						
Persistent late payment						
Unreasonable allocation of risk						
Unclear allocation of risk						
Unclear scope of work						
Inadequate contract administration						
Undue delay in processing claims for variations and EOT						
Failure to hand over the site in time						
Failure to provide all information known at the time of tender						
Failure to issue certificates						
Time consuming and expensive dispute resolution procedures						
Differences in contract interpretation						
Unrealistic assessment of valid claims						
Differences in treating latent conditions						
<b>Human Factors</b>						
Incompetence of client's management staff						
Inflexibility and intransigence of client's staff to understand contractor's position and consequences of decisions						
Adversarial attitude of client's staff						
Lack of communications						
Client's staff not sufficiently trained in contract management						

Reactive rather than proactive approach to dispute resolution						
No sense of a team approach						
<b>External Factors</b>						
Latent conditions						
Excessive bad weather						
Industrial actions						
Uncontrollable external events						
Political interference						

### SECTION 3: EXAMPLES OR CASE STUDIES OF GOOD PRACTICE AND BAD PRACTICE

We want to gather examples of good practice and bad practice from your perspective as a client. We expect these to be one or two paragraph narratives illustrating the more important aspects in your experience.

#### 3.1 Examples of Good Practice

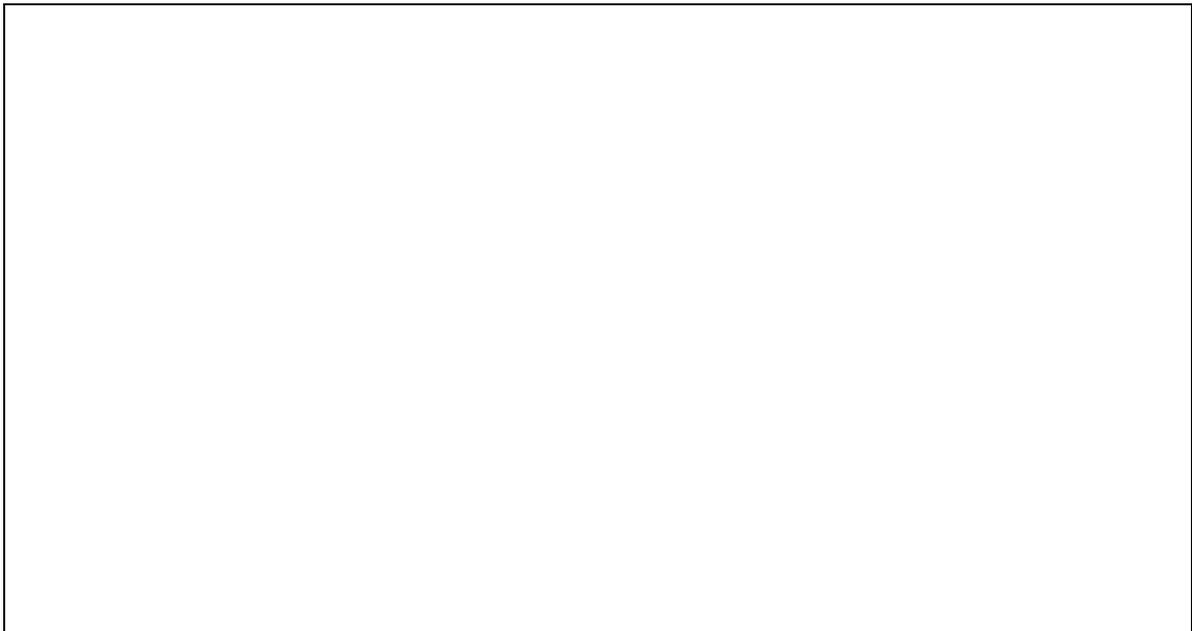
#### 3.2 Examples of Bad Practice

## **SECTION 4: SUGGESTED STRATEGIES FOR AVOIDANCE OF DISPUTES**

Do you have any ideas on suggested strategies to avoid disputes in construction contracts? Treat this as a brain-storming exercise and don't hold back. Provide dot points. We propose to explore any suggestions further during the interviews and workshops.

We would like to concentrate on proactive measures that treat issues in a timely way, thus preventing those issues evolving into formal disputes and which allow works to proceed without disruption.

### **4.1 Suggested Strategies to Avoid Disputes in Construction Contracts**



## SECTION 5: PREFERRED DISPUTE RESOLUTION PROCESSES

As mentioned earlier, some dispute resolution procedures can be, in effect, the causes of disputes. They may also exacerbate disputes.

There are many dispute resolution processes used in the construction industry including:

- 1) Negotiation between the parties
- 2) Negotiation using an independent arbiter
- 3) Independent appraisal and determination by an expert
- 4) Conciliation whereby experts review and comment on submissions from both parties and submit them to a conciliator. After due examination, enquiry and consideration, the conciliator makes an informal assessment and suggests a course for resolution which the parties may accept in good faith to reach early settlement
- 5) Mediation whereby an independent mediator works with both parties to explore issues, constraints and alternatives to assist the parties to reach an agreement
- 6) Appointing a Dispute Resolution Board at the time of contract award to work routinely and proactively with both parties during the contract to identify any incipient disputes and to treat them appropriately before they escalate
- 7) Arbitration where both parties submit their claims and counter claims before a judicial hearing. Questions of law may be referred by the arbitrator to the courts for determination
- 8) Litigation in the courts is a legal process which is binding on the parties.

### 5.1 Preferred Dispute Resolution Procedure According to Size of Contract

The procedures adopted depend very much on the nature and scope of the works in the contract. Using the same range of monetary values of projects as mentioned earlier, which processes are your preferred dispute resolution procedures? If your preference(s) are included in the list above, please enter the number(s) in the table below. If you have other preferences not listed, please add to the list above and enter these new numbers in the table

<b>Monetary Value in \$ millions</b>	<b>Preferred Dispute Resolution Procedure</b>
Up to \$20 million	
\$20 million to \$50 million	
\$50 million to \$200 million	
Over \$200 million	

**THANK YOU FOR YOUR PARTICIPATION AND CO-OPERATION!**

# Appendix B – CONTRACTOR QUESTIONNAIRE

## AVOIDANCE OF DISPUTES IN CONSTRUCTION CONTRACTS

### QUESTIONNAIRE FOR CONTRACTORS

#### Preamble

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Following collation and analysis of the data, we will arrange interviews or workshops with participants to further examine emerging themes and collaborate in developing appropriate guidelines.

Draft guidelines will be distributed to all participants for comment and modification before finalisation and endorsement by the CRC.

#### Data Required

We are seeking information on the following topics:

- **The scope and types of contracts.** We need to appreciate the types of contracts and contracting strategies in use and their scope or size in monetary terms.
- **The sources of disputes.** We need to know these in order to design appropriate strategies to avoid disputes developing at the sources. We have divided the sources into three contributing factors – contractual, human and external.
- **Examples or case studies of good practice and bad practice.** We want to know why some construction contracts ran smoothly and why others were problematic.
- **Suggested strategies for avoidance of disputes.** We are interested to explore further any remedies that participants already have in mind to avoid disputes. We want to learn about proactive and innovative ways to deal with issues before they evolve into formal disputes.

- **Preferred dispute resolution processes.** Although dispute resolution is not a part of our assignment, we are mindful that inappropriate resolution procedures may themselves be the cause of a dispute and lead to escalation or worsening of disputes. We want to get an idea of the industry's preferences so that the guidelines can deal with these – if appropriate.

## SECTION 1: SCOPE AND TYPES OF CONTRACTS

There are numerous types of contracts in use in the construction industry but the three main models can be summarized thus:

**Traditional** – where the client undertakes the planning and engages a designer to carry out the design and a constructor to build the facility/structure. Sometimes the client has the technical capability to undertake the design. These contracts may be either lump sum or schedule of rates. Cost plus contracts also come within this type but they are less common.

**Design and Construct** – where the client undertakes the initial planning and engages a consortium of a designer and a constructor to design and build the facility/structure.

**Collaborative** – where the client forms an alliance with the designer and the constructor to plan, design and build the facility/structure. These types of contracts are usually referred to as alliance contracts.

Many major projects are now being undertaken as Private Public Partnerships sometimes known as PPPs. These can take many forms such as Build, Own, Operate and Transfer (BOOT), Build, Operate and Transfer (BOT) and Design Build and Operate (DBO). However these projects usually employ variations and combinations of the three types mentioned above.

### 1.1 Scope of Projects

What percentage of your projects fall, by value, within the following ranges?

Monetary Value in \$ millions	Percentage of Total Portfolio
Up to \$20 million	
\$20 million to \$50 million	
\$50 million to \$200 million	
Over \$200 million	
Total	100%

### 1.2 Numbers of Current Contracts

How many contracts within this scope are you currently conducting?

Monetary Value in \$ millions	Numbers of Current Contracts
Up to \$20 million	
\$20 million to \$50 million	
\$50 million to \$200 million	
Over \$200 million	
Total	

### 1.3 Types of Contracts

Of the numbers of contracts that you are currently conducting, how many fall within the major project types?

Types of Contracts	Numbers of Current Contracts
Traditional	
Design and Construct	
Collaborative	

#### **1.4 Other types of Contracts**

Are there any other types of contracts you are currently conducting? If so, what types are they? Please provide particulars.

#### **1.5 Nature of Works Carried Out**

Please provide a general description of the nature of the works carried out under your contracts e.g. buildings, roads, bridges, water/sewerage works etc.

## SECTION 2: SOURCES OF DISPUTES

### 2.1 From a Contractor's Perspective

In order to appreciate the main causes of disputes, we want you – as a contractor undertaking work for clients – to nominate the dispute causes most common in your experience. We want to know two aspects – the frequency of a cause and its impact. We want you to rate these from high (H), medium (M) or low (L) with the most frequent and the highest impact being H and the lowest, L. If you wish to add other sources not listed here, please do so by expanding the table.

Sources of Disputes	Frequency			Impact		
	High	Med	Low	High	Med	Low
<b>Contractual Factors</b>						
Unrealistic expectations of the client for quality						
Unrealistic expectations of the client for schedule/program						
Unusual, non-standard or changed General Conditions of Contract						
Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents						
Unrealistic and difficult to construct designs						
Estimating errors where client is responsible for taking out quantities						
Slow client responses to queries and approval requests						
Inappropriate type of contract for the nature and scope of works						
Failure to provide sufficient resources or equipment for the project						
Post-contract changes to design details or the scope of work						
Persistent late payment						
Unreasonable allocation of risk						
Unclear allocation of risk						
Unclear scope of work						
Inadequate contract administration						
Undue delay in processing claims for variations and EOT						
Failure to hand over the site in time						
Failure to provide all information known at the time of tender						
Failure to issue certificates						
Time consuming and expensive dispute resolution procedures						
Differences in contract interpretation						
Unrealistic assessment of valid claims						
Differences in treating latent conditions						
<b>Human Factors</b>						
Incompetence of client's management staff						
Inflexibility and intransigence of client's staff to understand contractor's position and						

consequences of decisions						
Adversarial attitude of client's staff						
Lack of communications						
Client's staff not sufficiently trained in contract management						
Reactive rather than proactive approach to dispute resolution						
No sense of a team approach						
<b>External Factors</b>						
Latent conditions						
Excessive bad weather						
Industrial actions						
Uncontrollable external events						
Political interference						

## 2.2 From a Client's Perspective

Large contractors often use sub-contractors to undertake works for them. In these cases, contractors act as clients. We now want you to put yourself in the position of a client and rate what you think might be a fair assessment of the frequency and impact of a contractor's performance in contributing to contract disputes.

Sources of Disputes	Frequency			Impact		
	High	Med	Low	High	Med	Low
<b>Contractual Factors</b>						
Non-performance in quality						
Non-performance in schedule/program						
Exaggerated claims						
Excessive claims						
Unrealistic pricing at time of tender						
Estimating errors where contractor is responsible for taking out quantities						
Failure to implement safety plans						
Failure to submit required details expeditiously						
Failure to provide sufficient resources or equipment for the project						
Persistent errors in work						
Incompetent subcontractors						
Failure to manage sub-contractors						
Manufacturing claims in order to increase revenue						
Not proceeding with work when a dispute arises						
Lack of a Quality Management Plan						
Differences in the interpretation of contract requirements						
Differences in treating latent conditions						
<b>Human Factors</b>						
Incompetence of contractor's management staff						
Inflexibility and intransigence of contractor's staff to understand the client's position						
Adversarial attitude of contractor's staff						

Lack of communications						
Contractor's staff not sufficiently trained in contract management						
Reactive rather than proactive approach to dispute resolution						
No sense of a team approach						
<b>External Factors</b>						
Latent conditions						
Excessive bad weather						
Industrial actions						
Uncontrollable external events						
Political interference						

### SECTION 3: EXAMPLES OR CASE STUDIES OF GOOD PRACTICE AND BAD PRACTICE

We want to gather examples of good practice and bad practice from your perspective as a client. We expect these to be one or two paragraph narratives illustrating the more important aspects in your experience.

#### 3.1 Examples of Good Practice

#### 3.2 Examples of bad practice

## **SECTION 4: SUGGESTED STRATEGIES FOR AVOIDANCE OF DISPUTES**

Do you have any ideas on suggested strategies to avoid disputes in construction contracts? Treat this as a brain-storming exercise and don't hold back. Provide dot points. We propose to explore any suggestions further during the interviews and workshops.

We would like to concentrate on proactive measures that treat issues in a timely way, thus preventing those issues evolving into formal disputes and which allow works to proceed without disruption.

### **4.1 Suggested Strategies to Avoid Disputes in Construction Contracts**



## SECTION 5: PREFERRED DISPUTE RESOLUTION PROCESSES

As mentioned earlier, some dispute resolution procedures can be, in effect, the causes of disputes. They may also exacerbate disputes.

There are many dispute resolution processes used in the construction industry including:

- 1) Negotiation between the parties
- 2) Negotiation using an independent arbiter
- 3) Independent appraisal and determination by an expert
- 4) Conciliation whereby experts review and comment on submissions from both parties and submit them to a conciliator. After due examination, enquiry and consideration, the conciliator makes an informal assessment and suggests a course for resolution which the parties may accept in good faith to reach early settlement
- 5) Mediation whereby an independent mediator works with both parties to explore issues, constraints and alternatives to assist the parties to reach an agreement
- 6) Appointing a Dispute Resolution Board at the time of contract award to work routinely and proactively with both parties during the contract to identify any incipient disputes and to treat them appropriately before they escalate
- 7) Arbitration where both parties submit their claims and counter claims before a judicial hearing. Questions of law may be referred by the arbitrator to the courts for determination
- 8) Litigation in the courts is a legal process which is binding on the parties.

### 5.1 Preferred Dispute Resolution Procedure According to Size of Contract

The procedures adopted depend very much on the nature and scope of the works in the contract. Using the same range of monetary values of projects as mentioned earlier, which processes are your preferred dispute resolution procedures? If your preference(s) are included in the list above, please enter the number(s) in the table below. If you have other preferences not listed, please add to the list above and enter these new numbers in the table

Monetary Value in \$ millions	Preferred Dispute Resolution Procedure
Up to \$20 million	
\$20 million to \$50 million	
\$50 million to \$200 million	
Over \$200 million	

**THANK YOU FOR YOUR PARTICIPATION AND CO-OPERATION!**

## Appendix C – SCOPE AND TYPES OF CONTRACT

**Table C.1: Scope and types of contracts**

Organisation and Respondent	1.1	1.2	1.3	2.2	2.3	2.4	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.5	7.5	7.6	8.1	8.3	8.4	8.5	9.1	9.2	9.3	9.4	9.5	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11		
<b>1.1 What percentage of your projects, by value, fall within the following ranges?</b>	%																																											
Up to \$20 million	0	0	0	0	0			2		0	0	29	2	0	0	53	0	16	33	85	5	0		0	100		0	30	96	96	96	96	96	100		100	100%	100%	100%	100%	100%	100%	100%	97.8
\$20 million to \$50 million	30	25	20	33	0			9		0	0	0	0	10	30	29	10	32	33	0	10	50		0			25	20	3	3	3	3	3										1.1	
\$50 million to \$200 million	50	50	50	67	33		75	31		100	0	43	39	80	30	12	60	47	33	15	85	25		50			31	25	1	1	1	1	1										1%	
Over \$200 million	20	25	30	0	67		25	58		0	100	29	60	10	40	6	30	5	0	0		25		50		100	44	25	0	0	0	0	0										0%	
<b>Total</b>	<b>100</b>																																											
<b>1.2 How many contracts within this scope are you currently conducting?</b>																																												
Up to \$20 million	2	0	0					1	0	0	0	2	2	0	0	9	0	2					0	0	5		0	100	241	241	241	0	241	8	N/A	16	1	4	3	5	4	687		
\$20 million to \$50 million	0	1	3	1				2	0	0	0	0	0	1	5	5	1	1				2	0				4	10	8	8	8	0	8									11		
\$50 million to \$200 million	1	1	5	2			3	2	0	1	0	3	3	4	4	2	2	3	1	1		1		1			5	10	2	2	2	0	2									11		
Over \$200 million	1	0	1	0	1	0	1	2	1	0	1	2	2	1	2	1	3	0				1	1	1		1	7	5	1	1	1	0	1									1		
<b>Total</b>	<b>4</b>	<b>2</b>	<b>9</b>				<b>4</b>	<b>7</b>				<b>7</b>	<b>7</b>	<b>6</b>	<b>11</b>	<b>17</b>	<b>6</b>	<b>6</b>															<b>8</b>		<b>16</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>710</b>			
<b>1.3 Of the numbers of contracts that you are currently conducting, how many fall within the major project types?</b>																																												
Traditional	1	0	0	2				4	0	0	0	1	1	0	5	3	0	6	1			0					4	1	241	241	241	115	241	6	1	15	1		3	1	4	1017		
Design and Construct	2	1	4	1			3	3	1	1	1	4	6	6	2	4	2	0		1	1	1	1	2		1	2	0		12		12			2	3	1		3	3	1	57		
Collaborative	1	2	5	0	1	0	1		0	0	0	0	0	0	2	10	4	0				3			5		5	0											0			2		
<b>Total</b>	<b>4</b>	<b>3</b>	<b>9</b>												<b>17</b>	<b>6</b>	<b>6</b>																									<b>1076</b>		

**Table C.2: Scope and types of contracts – aggregate results. Organisational maximums used to derive these figures.**

<b>1.2 How many contracts within this scope are you currently conducting?</b>	
Up to \$20 million	1058
\$20 million to \$50 million	43
\$50 million to \$200 million	42
Over \$200 million	29
<b>Total</b>	<b>1172</b>
<b>1.3 Of the numbers of contracts that you are currently conducting, how many fall within the major project types?</b>	
Traditional	1292
Design and Construct	94
Collaborative	27
<b>Total</b>	<b>1413</b>

**Table C.3: Scope and types of contracts – open-ended questions**

<b>Organisation 1</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	Company currently tendering: • Alliances • Early contract involvement	• Roads/bridges • Hospitals • Tendering – bridges, water projects
2	Construction management where we act as agent on behalf of principal responsible for the construction delivery, designed by the client.	Health care Public infrastructure
3	Collaborative includes Cost Plus & Management	Generally civil works involving roads, bridges and services
<b>Organisation 2</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	Blank	1 contract is a new dam 1 contract is upgrading an existing dam 1 contract is a sewage transfer system
2		Rail Project – capital investment for major infrastructure improvement.
<b>Organisation 3</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	The 'collaborative' contract mentioned above is actually a Managing Contractor Contract with the Department of Defence, where we manage the design & construction, but take no risk on the subcontractors costs.	Office buildings, aircraft hangers, headquarter buildings.
2	• ECI – Early Contractor Involvement that utilizes an open transaction period to determine the project scope, design, and deliver the basis of contract based on risk adjustment. Requires the contractor to nominate business as usual offsite overheads and profit margin. Value is audited by Independent Estimator. • DECI – Double Early Contractor Involvement, similar process as above but with two teams in a competitive manner to drive value. Contractor not required to nominate business as usual overheads and profit margin. • All contracts have a Relationship Process, and recently the larger projects have Dispute Resolution Board. • D&C program on a project that requires each stage a D&C price to be submitted that is checked by a independent Consultant and differences need to be established and agreed prior to award of each next stage.	Roads, Bridges primarily, but will include associated works of Public Utility Plant.
3	Blank	\$335m Commercial Office tower
4	Hire plant contracts, supplier contracts, labour contracts, construct contracts, service contracts	construction of larger interchanges including roads, bridges, lighting, landscaping, public utilities New road including bridgework and roundabouts
<b>Organisation 4</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	Managing Contractor Contract for Dept of Defence	Buildings
2		This response is in respect only of our building works.
3		commercial building

**Table C.3: Scope and types of contracts – open-ended questions (continued).**

<b>Organisation 6</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1		Buildings (Commercial), roads, bridges, rail, water
2		Rail infrastructure <ul style="list-style-type: none"> <li>• New track construction</li> <li>• Resleeping and re-railing</li> <li>• Re gauging</li> <li>• Bridge renewal</li> <li>• Turnout installation</li> <li>• Concrete sleeper manufacture</li> <li>• Formation works</li> <li>• Signalling</li> </ul>
3		Infrastructure: <ul style="list-style-type: none"> <li>• Road</li> <li>• Rail desalination plant</li> <li>• Sewage treatment plant</li> <li>• Water treatment plant</li> </ul>
4	Four of the six current projects are Target Cost Contracts, whereby the Client and Contractor have jointly developed Target Cost Estimate under a Master Period Agreement for 'gain / pain sharing' in performance adjustment at conclusion of the projects.	Nature of the works carried out :- Construction of high voltage of transmission lines
<b>Organisation 7</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	None	Roadworks Bridges Telecommunications Water/Sewage Pipelines Earthworks Structural Steel works
2	Current project is a D&C, we are engaged as the Managing Contractor. All costs associated with trades and some preliminaries are reimbursable by the Client.	Buildings (4 major). Airport Runway Upgrade including New Taxiways and Fuel Services Upgrade.
3	Managing Contractor (this is the project referred to above)	Buildings, airfield works
4		Water/sewerage – 3 contracts Roads/ bridges, tunnels – 1 contract
5	NO	Buildings: Specifically Design and Construct of an Educational and Training Precinct  Public/Private/Partnership – Government Educational Project
<b>Organisation 8</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	N/A	Pedestrian overpass bridges, Arterial bikeways, major refurbishments of road and drainage structures
2	Early Contractor Involvement contracts. I think there are about 11 underway across the state.	Transport infrastructure: Roads, bridges, busways.
3	n/a	Major road interchange upgrade. Motorway to motorway interchange. Substantial structures (10 bridges) and civil works. 2km of motorway at a cost of \$255m in total
4	Early contractor involvement (ECI) - these contracts are essentially an alliance front (and development phase) and combination lump sum/schedule of rates for the construction phase - 5 contracts.	large scale road and bridge works
5	§ Early Contractor Involvement (ECI) § Roadworks Performance Contracts (sole invitation) § Relational Incentive Contract	Planning, design, construction and/or maintenance of road and bridge infrastructure.

**Table C.3: Scope and types of contracts – open-ended questions (continued).**

<b>Organisation 9</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	Seven other projects have been called during the 2007/2008 financial year using the one of the following forms of contracts: Managing Contractor Managing Contractor - 2 Stage Managing Contractor Design and Construction Management Managing Contractor Single Stage-Documentation and Construction Management	Buildings – schools, police stations, court houses, aquaculture centre, electrical upgrades, air conditioning installations & upgrades, housing – houses, units, duplexes
2	same	same
3	Same	same
4	no other types	Buildings - mainly houses and Units
5		same as 1
<b>Organisation 10</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	Preferred supplier – Building services design works on municipal infrastructure. Preferred supplier – supply and then the installation of fire detectors.	Refurbishment of municipal building, construction of 2 swimming pool facilities, upgrade of urban space, re-development of riverside facilities and construction of a wading pool.
2	Internal relationship with builder	Buildings, pavement, landscape, transformer, shelters, carparks, sewer, water, street lighting, optic fibre, maintenance pits,
3	N/A	Buildings
4	No	Building Project, new building with associated external civil and landscaping works.
5	Non comment	Civil Construction, upgrade with high quality finishes to footpath surfaces, street furniture, landscape and public art.
6	The above three contracts have a D & C portion of 25% in each project.	All three contracts are swimming pools and approximate values of \$6-7M with the Pools (2x25m in each complex D&C) An EOI was issued for the Pools and the successful applicants were included in the EOI documents issued for the principal contractors. The Principal contractors were then required to select the pool builders from those “recommended” and tenders were called on this basis. The principal contractor would be responsible for the specialist pool builder contractor. The Projects consist of 2 x 25M pools which are LapPools and Learn to swim pool with an operator to take possession on completion and run the complexes on a commercial basis. The operator has a commitment to allow public access to the pools at any time on a pay as you go basis and a period of agreed usage by the school who’s grounds have been leased for the project. The projects will have an individual flavour as operators have differing commercial ideas, e.g. Coffee bar, fit kid studio, learn to swim, aqua-aerobics, hydrotherapy classes etc. Complexes require not only the pools and filtration equipment but, access roads, car parks, change areas, parents viewing areas, play areas landscape and considerable water wise initiatives in the current water restricted environment. Both Pools are heated and the learn to swim pool is indoor complex subsequently unlike some traditional Council Pools these will operate 12 Mths of the year.
7	Internal Strategic Partnering Agreement	Stormwater Quality Improvement Devise and Buildings
8	nil at present	Bus dept infrastructure, bandstand and facilities Roads and footpaths
<b>Organisation 11</b>		
	<b>1.4 Other types of contracts</b>	<b>1.5 Nature of Works Carried Out</b>
1	There are no other types of contracts	

## Appendix D – SOURCES OF DISPUTES

Table D.1: Sources of disputes identified by Clients.

SECTION 2: SOURCES OF DISPUTES (CLIENTS)	no	%	Freq. Low	No	%	Freq. Med.	no	%	Freq. High	Total	no	%	Impact Low	no	%	Impact Med.	no	%	Impact High	Total	
Organisation Code																					
<b>Sources of Disputes - Client Perspective</b>																					
<b>Contractual Factors</b>																					
Non-performance in quality	8	35%	Low	10	43%	Med	5	22%	High	23	4	17%	Low	14	61%	Med	5	22%	High	23	
Non-performance in schedule/program	7	30%	Low	12	52%	Med	4	17%	High	23	5	22%	Low	10	43%	Med	8	35%	High	23	
Exaggerated claims	9	39%	Low	11	48%	Med	3	13%	High	23	8	35%	Low	12	52%	Med	3	13%	High	23	
Excessive claims	12	52%	Low	8	35%	Med	3	13%	High	23	7	30%	Low	13	57%	Med	3	13%	High	23	
Unrealistic pricing at time of tender	13	57%	Low	7	30%	Med	3	13%	High	23	8	35%	Low	5	22%	Med	10	43%	High	23	
Estimating errors where contractor is responsible for taking out quantities	13	65%	Low	5	25%	Med	2	10%	High	20	10	50%	Low	5	25%	Med	5	25%	High	20	
Failure to implement safety plans	21	91%	Low	1	4%	Med	1	4%	High	23	10	45%	Low	6	27%	Med	6	27%	High	22	
Failure to submit required details expeditiously	5	22%	Low	13	57%	Med	5	22%	High	23	9	39%	Low	13	57%	Med	1	4%	High	23	
Failure to provide sufficient resources or equipment for the project	10	43%	Low	8	35%	Med	5	22%	High	23	5	22%	Low	10	43%	Med	8	35%	High	23	
Persistent errors in work	15	68%	Low	4	18%	Med	3	14%	High	22	8	36%	Low	10	45%	Med	4	18%	High	22	
Incompetent subcontractors	18	82%	Low	2	9%	Med	2	9%	High	22	6	27%	Low	9	41%	Med	7	32%	High	22	
Failure to manage sub-contractors	12	55%	Low	7	32%	Med	3	14%	High	22	8	38%	Low	5	24%	Med	8	38%	High	21	
Manufacturing claims in order to increase revenue	18	82%	Low	3	14%	Med	1	5%	High	22	11	50%	Low	7	32%	Med	4	18%	High	22	
Not proceeding with work when a dispute arises	21	95%	Low	1	5%	Med	0	0%	High	22	10	45%	Low	7	32%	Med	5	23%	High	22	
Lack of a Quality Management Plan	19	86%	Low	2	9%	Med	1	5%	High	22	13	59%	Low	7	32%	Med	2	9%	High	22	
Differences in the interpretation of contract requirements	6	27%	Low	9	41%	Med	7	32%	High	22	3	14%	Low	13	59%	Med	6	27%	High	22	
Differences in treating latent conditions	13	59%	Low	7	32%	Med	2	9%	High	22	5	23%	Low	13	59%	Med	4	18%	High	22	
<b>Human Factors</b>																					
Incompetence of contractor's management staff	14	64%	Low	6	27%	Med	2	9%	High	22	5	23%	Low	7	32%	Med	10	45%	High	22	
Inflexibility and intransigence of contractor's staff to understand the client's position	12	55%	Low	6	27%	Med	4	18%	High	22	8	36%	Low	9	41%	Med	5	23%	High	22	
Adversarial attitude of contractor's staff	14	64%	Low	5	23%	Med	3	14%	High	22	7	32%	Low	10	45%	Med	5	23%	High	22	
Lack of communications	12	55%	Low	8	36%	Med	2	9%	High	22	6	27%	Low	10	45%	Med	6	27%	High	22	

Contractor's staff not sufficiently trained in contract management	13	59%	Low	8	36%	Med	1	5%	High	22	12	55%	Low	8	36%	Med	2	9%	High	22
Reactive rather than proactive approach to dispute resolution	12	55%	Low	8	36%	Med	2	9%	High	22	10	45%	Low	9	41%	Med	3	14%	High	22
No sense of a team approach	13	62%	Low	5	24%	Med	3	14%	High	21	9	43%	Low	10	48%	Med	2	10%	High	21
<b>External Factors</b>																				
Latent conditions	10	45%	Low	9	41%	Med	3	14%	High	22	8	36%	Low	7	32%	Med	7	32%	High	22
Excessive bad weather	16	70%	Low	6	26%	Med	1	4%	High	23	13	57%	Low	8	35%	Med	2	9%	High	23
Industrial actions	20	87%	Low	3	13%	Med	0	0%	High	23	16	70%	Low	6	26%	Med	1	4%	High	23
Uncontrollable external events	18	78%	Low	5	22%	Med	0	0%	High	23	14	61%	Low	8	35%	Med	1	4%	High	23
Political interference	18	78%	Low	3	13%	Med	2	9%	High	23	15	65%	Low	3	13%	Med	5	22%	High	23
<b>Sources of Disputes - Contractor Perspective</b>																				
<b>Contractual Factors</b>																				
Unrealistic expectations of the client for quality	8	35%	Low	10	43%	Med	5	22%	High	23	4	17%	Low	14	61%	Med	5	22%	High	23
Unrealistic expectations of the client for schedule/program	9	39%	Low	8	35%	Med	6	26%	High	23	8	35%	Low	11	48%	Med	4	17%	High	23
Unusual, non-standard or changed General Conditions of Contract	14	61%	Low	7	30%	Med	2	9%	High	23	11	48%	Low	8	35%	Med	4	17%	High	23
Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents	4	17%	Low	9	39%	Med	10	43%	High	23	4	17%	Low	9	39%	Med	10	43%	High	23
Unrealistic and difficult to construct designs	10	43%	Low	11	48%	Med	2	9%	High	23	5	22%	Low	10	43%	Med	8	35%	High	23
Estimating errors where client is responsible for taking out quantities	11	50%	Low	9	41%	Med	2	9%	High	22	10	45%	Low	8	36%	Med	4	18%	High	22
Slow client responses to queries and approval requests	6	26%	Low	11	48%	Med	6	26%	High	23	4	17%	Low	10	43%	Med	9	39%	High	23
Inappropriate type of contract for the nature and scope of works	15	68%	Low	7	32%	Med	0	0%	High	22	9	41%	Low	10	45%	Med	3	14%	High	22
Failure to provide sufficient resources or equipment for the project	15	68%	Low	4	18%	Med	3	14%	High	22	10	45%	Low	10	45%	Med	2	9%	High	22
Post-contract changes to design details or the scope of work	6	27%	Low	11	50%	Med	5	23%	High	22	5	23%	Low	10	45%	Med	7	32%	High	22
Persistent late payment	21	95%	Low	1	5%	Med	0	0%	High	22	12	55%	Low	5	23%	Med	5	23%	High	22
Unreasonable allocation of risk	8	36%	Low	12	55%	Med	2	9%	High	22	6	27%	Low	10	45%	Med	6	27%	High	22
Unclear allocation of risk	8	36%	Low	9	41%	Med	5	23%	High	22	6	27%	Low	12	55%	Med	4	18%	High	22
Unclear scope of work	13	59%	Low	7	32%	Med	2	9%	High	22	6	27%	Low	10	45%	Med	6	27%	High	22
Inadequate contract administration	13	59%	Low	7	32%	Med	2	9%	High	22	9	41%	Low	9	41%	Med	4	18%	High	22
Undue delay in processing claims for variations and EOT	9	41%	Low	10	45%	Med	3	14%	High	22	6	27%	Low	14	64%	Med	2	9%	High	22
Failure to hand over the site in time	18	82%	Low	4	18%	Med	0	0%	High	22	10	45%	Low	8	36%	Med	4	18%	High	22
Failure to provide all information known at the time of tender	17	77%	Low	4	18%	Med	1	5%	High	22	6	27%	Low	13	59%	Med	3	14%	High	22
Failure to issue certificates	17	77%	Low	4	18%	Med	1	5%	High	22	15	68%	Low	5	23%	Med	2	9%	High	22
Time consuming and expensive dispute resolution procedures	15	68%	Low	5	23%	Med	2	9%	High	22	8	36%	Low	7	32%	Med	7	32%	High	22

Differences in contract interpretation	7	32%	Low	9	41%	Med	6	27%	High	22	6	27%	Low	12	55%	Med	4	18%	High	22
Unrealistic assessment of valid claims	12	55%	Low	7	32%	Med	3	14%	High	22	5	23%	Low	11	50%	Med	6	27%	High	22
Differences in treating latent conditions	13	59%	Low	4	18%	Med	5	23%	High	22	7	32%	Low	11	50%	Med	4	18%	High	22
<b>Human Factors</b>																				
Incompetence of client's management staff	15	65%	Low	7	30%	Med	1	4%	High	23	6	26%	Low	11	48%	Med	6	26%	High	23
Inflexibility and intransigence of client's staff to understand contractor's position and consequences of decisions	7	30%	Low	14	61%	Med	2	9%	High	23	4	17%	Low	14	61%	Med	5	22%	High	23
Adversarial attitude of client's staff	15	65%	Low	8	35%	Med	0	0%	High	23	4	17%	Low	14	61%	Med	5	22%	High	23
Lack of communications	13	57%	Low	9	39%	Med	1	4%	High	23	7	30%	Low	11	48%	Med	5	22%	High	23
Client's staff not sufficiently trained in contract management	16	70%	Low	5	22%	Med	2	9%	High	23	9	39%	Low	12	52%	Med	2	9%	High	23
Reactive rather than proactive approach to dispute resolution	13	57%	Low	7	30%	Med	3	13%	High	23	7	32%	Low	13	59%	Med	2	9%	High	22
No sense of a team approach	14	64%	Low	5	23%	Med	3	14%	High	22	9	43%	Low	8	38%	Med	4	19%	High	21
<b>External Factors</b>																				
Latent conditions	9	39%	Low	9	39%	Med	5	22%	High	23	6	26%	Low	10	43%	Med	7	30%	High	23
Excessive bad weather	14	61%	Low	7	30%	Med	2	9%	High	23	8	35%	Low	10	43%	Med	5	22%	High	23
Industrial actions	22	96%	Low	1	4%	Med	0	0%	High	23	14	61%	Low	8	35%	Med	1	4%	High	23
Uncontrollable external events	16	73%	Low	5	23%	Med	1	5%	High	22	11	50%	Low	10	45%	Med	1	5%	High	22
Political interference	16	70%	Low	4	17%	Med	3	13%	High	23	14	61%	Low	5	22%	Med	4	17%	High	23

**Table D.2: Sources of disputes identified by Clients.**

<b>Sources of Dispute – Client perspective</b>	<b>Comment</b>
Contractual Factors	The majority of respondents rated contractual factors as occurring on a low – medium frequency. The majority of respondents also rated these factors as having a low to medium impact, except for two. These two factors, 'Unrealistic pricing at time of tenure' and 'Failure to manage sub contractor' were rated as having a high impact.
Human Factors	The majority of respondents rated all human factors as occurring at a low frequency. All factors were rated as having low to medium impact, except for 'Incompetence of contractor's management staff', which rated high.
External Factors	The majority of respondents rated all External factors as occurring at a low frequency as well as having a low Impact.
<b>Sources of Dispute – Contractor perspective</b>	<b>Comment</b>
Contractual Factors	The majority of respondents rated the Contractual factors as occurring at a low to medium frequency whilst also having a low to medium impact. Only one factor, 'Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents' was rated by the majority of respondents as having both a high frequency and high impact.
Human Factors	The majority of respondent rated human factors as occurring infrequently, except 'Inflexibility and intransigence of client's staff to understand contractor's position and consequences of decisions' which attracted a medium frequency. The majority of respondents subsequently rated the impact of all factors in this section as medium.
External Factors	The majority of respondents rated all External factors as occurring at a low frequency. These factors were also rated to be between low and medium impact.

**Table D.3: Summary table of sources of disputes as identified by Clients.**

<b>Client perspective</b>	<b>Response</b>	<b>Item summary</b>
Contractual Factors	Low frequency High impact	<ul style="list-style-type: none"> <li>▪ Unrealistic pricing at time of tenure</li> <li>▪ Failure to manage sub contractor</li> </ul>
Human Factors	Low frequency High impact	<ul style="list-style-type: none"> <li>▪ Incompetence of contractor's management staff'</li> </ul>
External Factors	low frequency low impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>
<b>Contractor perspective</b>	<b>Response</b>	<b>Item summary</b>
Contractual factors	High frequency High Impact	<ul style="list-style-type: none"> <li>▪ Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents</li> </ul>
Human factors	low frequency medium impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>
External factors	low frequency low-med. impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>

**Table D.4: Sources of disputes identified by Contractors.**

SECTION 2: SOURCES OF DISPUTES (Contractors)																				
	no	%	Freq. Low	no	%	Freq. Medium	no	%	Freq. High	Total	no	%	Impact Low	no	%	Impact Medium	no	%	Impact High	Total
Organisation Code																				
<b>Sources of Disputes - Client Perspective</b>																				
<b>Contractual Factors</b>																				
Non-performance in quality	3	13%	Low	12	50%	Med	9	38%	High	24	3	13%	Low	14	58%	Med	7	29%	High	24
Non-performance in schedule/program	1	4%	Low	12	48%	Med	12	48%	High	25	1	4%	Low	11	44%	Med	13	52%	High	25
Exaggerated claims	4	16%	Low	13	52%	Med	8	32%	High	25	3	12%	Low	19	76%	Med	3	12%	High	25
Excessive claims	4	16%	Low	16	64%	Med	5	20%	High	25	2	8%	Low	18	72%	Med	5	20%	High	25
Unrealistic pricing at time of tender	8	32%	Low	16	64%	Med	1	4%	High	25	5	20%	Low	12	48%	Med	8	32%	High	25
Estimating errors where contractor is responsible for taking out quantities	11	44%	Low	12	48%	Med	2	8%	High	25	9	36%	Low	11	44%	Med	5	20%	High	25
Failure to implement safety plans	11	46%	Low	9	38%	Med	4	17%	High	24	4	17%	Low	11	46%	Med	9	38%	High	24
Failure to submit required details expeditiously	5	20%	Low	16	64%	Med	4	16%	High	25	11	44%	Low	11	44%	Med	3	12%	High	25
Failure to provide sufficient resources or equipment for the project	3	12%	Low	16	64%	Med	6	24%	High	25	0	0%	Low	12	48%	Med	13	52%	High	25
Persistent errors in work	12	48%	Low	11	44%	Med	2	8%	High	25	4	17%	Low	17	71%	Med	3	13%	High	24
Incompetent subcontractors	19	76%	Low	4	16%	Med	2	8%	High	25	4	16%	Low	11	44%	Med	10	40%	High	25
Failure to manage sub-contractors	8	32%	Low	17	68%	Med	0	0%	High	25	3	12%	Low	15	60%	Med	7	28%	High	25
Manufacturing claims in order to increase revenue	13	52%	Low	10	40%	Med	2	8%	High	25	7	28%	Low	12	48%	Med	6	24%	High	25
Not proceeding with work when a dispute arises	23	92%	Low	2	8%	Med	0	0%	High	25	5	20%	Low	8	32%	Med	12	48%	High	25
Lack of a Quality Management Plan	10	42%	Low	10	42%	Med	4	17%	High	24	12	50%	Low	11	46%	Med	1	4%	High	24
Differences in the interpretation of contract requirements	8	32%	Low	13	52%	Med	4	16%	High	25	4	16%	Low	19	76%	Med	2	8%	High	25
Differences in treating latent conditions	16	64%	Low	9	36%	Med	0	0%	High	25	8	32%	Low	16	64%	Med	1	4%	High	25
<b>Human Factors</b>																				
Incompetence of contractor's management staff	15	60%	Low	10	40%	Med	0	0%	High	25	5	20%	Low	13	52%	Med	7	28%	High	25
Inflexibility and intransigence of contractor's staff to understand the client's position	9	36%	Low	14	56%	Med	2	8%	High	25	5	20%	Low	18	72%	Med	2	8%	High	25
Adversarial attitude of contractor's staff	11	44%	Low	12	48%	Med	2	8%	High	25	4	16%	Low	21	84%	Med	0	0%	High	25
Lack of communications	7	28%	Low	16	64%	Med	2	8%	High	25	5	20%	Low	16	64%	Med	4	16%	High	25
Contractor's staff not sufficiently trained in contract management	8	32%	Low	11	44%	Med	6	24%	High	25	9	36%	Low	11	44%	Med	5	20%	High	25
Reactive rather than proactive approach to dispute resolution	6	24%	Low	17	68%	Med	2	8%	High	25	6	24%	Low	16	64%	Med	3	12%	High	25
No sense of a team approach	14	58%	Low	8	33%	Med	2	8%	High	24	8	33%	Low	12	50%	Med	4	17%	High	24

<b>External Factors</b>																				
Latent conditions	14	56%	Low	10	40%	Med	1	4%	High	25	10	40%	Low	8	32%	Med	7	28%	High	25
Excessive bad weather	14	56%	Low	10	40%	Med	1	4%	High	25	8	32%	Low	10	40%	Med	7	28%	High	25
Industrial actions	22	88%	Low	3	12%	Med	0	0%	High	25	13	52%	Low	9	36%	Med	3	12%	High	25
Uncontrollable external events	17	68%	Low	7	28%	Med	1	4%	High	25	8	32%	Low	14	56%	Med	3	12%	High	25
Political interference	23	92%	Low	2	8%	Med	0	0%	High	25	17	68%	Low	7	28%	Med	1	4%	High	25
<b>Sources of Disputes - Contractor Perspective</b>																				
<b>Contractual Factors</b>																				
Unrealistic expectations of the client for quality	16	62%	Low	9	35%	Med	1	4%	High	26	10	38%	Low	11	42%	Med	5	19%	High	26
Unrealistic expectations of the client for schedule/program	6	23%	Low	13	50%	Med	7	27%	High	26	3	12%	Low	13	50%	Med	10	38%	High	26
Unusual, non-standard or changed General Conditions of Contract	6	23%	Low	9	35%	Med	11	42%	High	26	4	15%	Low	14	54%	Med	8	31%	High	26
Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents	5	19%	Low	7	27%	Med	14	54%	High	26	3	12%	Low	15	58%	Med	8	31%	High	26
Unrealistic and difficult to construct designs	13	50%	Low	11	42%	Med	2	8%	High	26	6	23%	Low	13	50%	Med	7	27%	High	26
Estimating errors where client is responsible for taking out quantities	19	76%	Low	4	16%	Med	2	8%	High	25	10	40%	Low	13	52%	Med	2	8%	High	25
Slow client responses to queries and approval requests	3	12%	Low	12	46%	Med	11	42%	High	26	2	8%	Low	14	54%	Med	10	38%	High	26
Inappropriate type of contract for the nature and scope of works	14	54%	Low	11	42%	Med	1	4%	High	26	6	23%	Low	16	62%	Med	4	15%	High	26
Failure to provide sufficient resources or equipment for the project	14	54%	Low	10	38%	Med	2	8%	High	26	8	31%	Low	12	46%	Med	6	23%	High	26
Post-contract changes to design details or the scope of work	2	8%	Low	9	38%	Med	13	54%	High	24	4	17%	Low	10	42%	Med	10	42%	High	24
Persistent late payment	23	92%	Low	1	4%	Med	1	4%	High	25	13	52%	Low	8	32%	Med	4	16%	High	25
Unreasonable allocation of risk	4	15%	Low	10	38%	Med	12	46%	High	26	2	8%	Low	8	31%	Med	16	62%	High	26
Unclear allocation of risk	10	38%	Low	8	31%	Med	8	31%	High	26	3	12%	Low	12	46%	Med	11	42%	High	26
Unclear scope of work	9	35%	Low	12	46%	Med	5	19%	High	26	3	12%	Low	13	50%	Med	10	38%	High	26
Inadequate contract administration	10	38%	Low	12	46%	Med	4	15%	High	26	5	19%	Low	17	65%	Med	4	15%	High	26
Undue delay in processing claims for variations and EOT	4	15%	Low	13	50%	Med	9	35%	High	26	3	12%	Low	17	65%	Med	6	23%	High	26
Failure to hand over the site in time	19	73%	Low	6	23%	Med	1	4%	High	26	4	15%	Low	11	42%	Med	11	42%	High	26
Failure to provide all information known at the time of tender	7	27%	Low	13	50%	Med	6	23%	High	26	0	0%	Low	16	62%	Med	10	38%	High	26
Failure to issue certificates	17	65%	Low	7	27%	Med	2	8%	High	26	13	50%	Low	11	42%	Med	2	8%	High	26
Time consuming and expensive dispute resolution procedures	11	42%	Low	11	42%	Med	4	15%	High	26	2	8%	Low	12	46%	Med	12	46%	High	26
Differences in contract interpretation	3	12%	Low	11	42%	Med	12	46%	High	26	0	0%	Low	12	46%	Med	14	54%	High	26
Unrealistic assessment of valid claims	2	8%	Low	12	46%	Med	12	46%	High	26	1	4%	Low	11	42%	Med	14	54%	High	26

Differences in treating latent conditions	9	35%	Low	9	35%	Med	8	31%	High	26	2	8%	Low	13	52%	Med	10	40%	High	25
<b>Human Factors</b>																				
Incompetence of client's management staff	10	38%	Low	13	50%	Med	3	12%	High	26	2	8%	Low	17	65%	Med	7	27%	High	26
Inflexibility and intransigence of client's staff to understand contractor's position and consequences of decisions	3	12%	Low	14	54%	Med	9	35%	High	26	2	8%	Low	15	60%	Med	8	32%	High	25
Adversarial attitude of client's staff	11	42%	Low	12	46%	Med	3	12%	High	26	4	15%	Low	14	54%	Med	8	31%	High	26
Lack of communications	9	35%	Low	12	46%	Med	5	19%	High	26	5	19%	Low	10	38%	Med	11	42%	High	26
Client's staff not sufficiently trained in contract management	10	38%	Low	10	38%	Med	6	23%	High	26	3	12%	Low	16	62%	Med	7	27%	High	26
Reactive rather than proactive approach to dispute resolution	4	15%	Low	14	54%	Med	8	31%	High	26	3	12%	Low	13	50%	Med	10	38%	High	26
No sense of a team approach	10	38%	Low	12	46%	Med	4	15%	High	26	8	31%	Low	9	35%	Med	9	35%	High	26
<b>External Factors</b>																				
Latent conditions	9	35%	Low	13	50%	Med	4	15%	High	26	4	15%	Low	11	42%	Med	11	42%	High	26
Excessive bad weather	13	50%	Low	9	35%	Med	4	15%	High	26	8	31%	Low	13	50%	Med	5	19%	High	26
Industrial actions	22	85%	Low	4	15%	Med	0	0%	High	26	16	62%	Low	7	27%	Med	3	12%	High	26
Uncontrollable external events	18	69%	Low	7	27%	Med	1	4%	High	26	12	46%	Low	12	46%	Med	2	8%	High	26
Political interference	23	88%	Low	3	12%	Med	0	0%	High	26	18	69%	Low	6	23%	Med	2	8%	High	26

**Table D.5: Sources of disputes identified by Contractors.**

<b>Sources of Dispute – Client perspective</b>	<b>Comment</b>
Contractual Factors	Respondents rated the frequency with which contractual factors occurred as between low to medium. All but two of these factors attracted a corresponding medium impact. Two factors attracted a high impact – these were 'Failure to provide sufficient resources or equipment for the project', and 'Not proceeding with work when a dispute arises', the latter occurring at a low frequency.
Human Factors	The majority of respondents rated Human factors as occurring on a medium frequency and having a medium impact.
External Factors	The majority of respondents rated all External factors as occurring at a low frequency, and attracting a low to medium impact.
<b>Sources of Dispute – Contractor perspective</b>	
Contractual Factors	<p>The majority of respondents rated most Contractual factors as occurring at a low to medium frequency. Factors that respondents considered to occur at the highest level included 'Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents' and 'Post-contract changes to design details or the scope of work'.</p> <p>Those factors where the majority of respondents rated a high frequency with a high impact included 'Post-contract changes to design details or the scope of work', 'Unreasonable allocation of risk', and 'Differences in contract interpretation'.</p>
Human Factors	All human factors were rated by the majority of respondents as occurring on a medium frequency. These factors had a medium impact except 'Lack of communication', which had a high impact.
External Factors	The majority of respondents attributed a low frequency to all external factors except 'Latent conditions'. These factors also rated as having a low to medium impact. 'Latent conditions' was the only item to attract a medium frequency with a medium to high impact.

**Table D.6: Summary of sources of disputes as identified by Contractors.**

<b>Client Perspective</b>	<b>Response</b>	<b>Item summary</b>
Contractual Factors	High impact	<ul style="list-style-type: none"> <li>▪ Failure to provide sufficient resources or equipment for the project</li> <li>▪ Not proceeding with work when a dispute arises</li> </ul>
Human Factors	low – med. frequency, medium impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>
External Factors	low frequency, low-med. Impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>
<b>Contractor perspective</b>	<b>Response</b>	<b>Item summary</b>
Contractual factors	High frequency High impact	<ul style="list-style-type: none"> <li>▪ Post-contract changes to design details or the scope of work</li> <li>▪ Unreasonable allocation of risk</li> <li>▪ Differences in contract interpretation</li> </ul>
Human factors	High Impact	<ul style="list-style-type: none"> <li>▪ Lack of communication</li> </ul>
External factors	Med frequency Med-high impact	<ul style="list-style-type: none"> <li>▪ Latent conditions</li> </ul>

**Table D.7: Sources of disputes for both Clients and Contractors.**

SECTION 2: SOURCES OF DISPUTES																				
	no	%	Freq. Low	no	%	Freq. Med.	no	%	Freq. High	Total	no	%	IMPACT LOW	no	%	IMPACT Med.	no	%	IMPACT High	Total
Organisation Code																				
<b>Sources of Disputes - Client Perspective</b>																				
<b>Contractual Factors</b>																				
Non-performance in quality	11	23%	Low	22	47%	Med	14	30%	High	47	7	15%	Low	28	60%	Med	12	26%	High	47
Non-performance in schedule/program	8	17%	Low	24	50%	Med	16	33%	High	48	6	13%	Low	21	44%	Med	21	44%	High	48
Exaggerated claims	13	27%	Low	24	50%	Med	11	23%	High	48	11	23%	Low	31	65%	Med	6	13%	High	48
Excessive claims	16	33%	Low	24	50%	Med	8	17%	High	48	9	19%	Low	31	65%	Med	8	17%	High	48
Unrealistic pricing at time of tender	21	44%	Low	23	48%	Med	4	8%	High	48	13	27%	Low	17	35%	Med	18	38%	High	48
Estimating errors where contractor is responsible for taking out quantities	24	53%	Low	17	38%	Med	4	9%	High	45	19	42%	Low	16	36%	Med	10	22%	High	45
Failure to implement safety plans	32	68%	Low	10	21%	Med	5	11%	High	47	14	30%	Low	17	37%	Med	15	33%	High	46
Failure to submit required details expeditiously	10	21%	Low	29	60%	Med	9	19%	High	48	20	42%	Low	24	50%	Med	4	8%	High	48
Failure to provide sufficient resources or equipment for the project	13	27%	Low	24	50%	Med	11	23%	High	48	5	10%	Low	22	46%	Med	21	44%	High	48
Persistent errors in work	27	57%	Low	15	32%	Med	5	11%	High	47	12	26%	Low	27	59%	Med	7	15%	High	46
Incompetent subcontractors	37	79%	Low	6	13%	Med	4	9%	High	47	10	21%	Low	20	43%	Med	17	36%	High	47
Failure to manage sub-contractors	20	43%	Low	24	51%	Med	3	6%	High	47	11	24%	Low	20	43%	Med	15	33%	High	46
Manufacturing claims in order to increase revenue	31	66%	Low	13	28%	Med	3	6%	High	47	18	38%	Low	19	40%	Med	10	21%	High	47
Not proceeding with work when a dispute arises	44	94%	Low	3	6%	Med	0	0%	High	47	15	32%	Low	15	32%	Med	17	36%	High	47
Lack of a Quality Management Plan	29	63%	Low	12	26%	Med	5	11%	High	46	25	54%	Low	18	39%	Med	3	7%	High	46
Differences in the interpretation of contract requirements	14	30%	Low	22	47%	Med	11	23%	High	47	7	15%	Low	32	68%	Med	8	17%	High	47
Differences in treating latent conditions	29	62%	Low	16	34%	Med	2	4%	High	47	13	28%	Low	29	62%	Med	5	11%	High	47
<b>Human Factors</b>																				
Incompetence of contractor's management staff	29	62%	Low	16	34%	Med	2	4%	High	47	10	21%	Low	20	43%	Med	17	36%	High	47
Inflexibility and intransigence of contractor's staff to understand the client's position	21	45%	Low	20	43%	Med	6	13%	High	47	13	28%	Low	27	57%	Med	7	15%	High	47
Adversarial attitude of contractor's staff	25	53%	Low	17	36%	Med	5	11%	High	47	11	23%	Low	31	66%	Med	5	11%	High	47
Lack of communications	19	40%	Low	24	51%	Med	4	9%	High	47	11	23%	Low	26	55%	Med	10	21%	High	47
Contractor's staff not sufficiently trained in contract management	21	45%	Low	19	40%	Med	7	15%	High	47	21	45%	Low	19	40%	Med	7	15%	High	47
Reactive rather than proactive approach to dispute resolution	18	38%	Low	25	53%	Med	4	9%	High	47	16	34%	Low	25	53%	Med	6	13%	High	47

No sense of a team approach	27	60%	Low	13	29%	Med	5	11%	High	45	17	38%	Low	22	49%	Med	6	13%	High	45
<b>External Factors</b>																				
Latent conditions	24	51%	Low	19	40%	Med	4	9%	High	47	18	38%	Low	15	32%	Med	14	30%	High	47
Excessive bad weather	30	63%	Low	16	33%	Med	2	4%	High	48	21	44%	Low	18	38%	Med	9	19%	High	48
Industrial actions	42	88%	Low	6	13%	Med	0	0%	High	48	29	60%	Low	15	31%	Med	4	8%	High	48
Uncontrollable external events	35	73%	Low	12	25%	Med	1	2%	High	48	22	46%	Low	22	46%	Med	4	8%	High	48
Political interference	41	85%	Low	5	10%	Med	2	4%	High	48	32	67%	Low	10	21%	Med	6	13%	High	48
<b>Sources of Disputes - Contractor Perspective</b>																				
<b>Contractual Factors</b>																				
Unrealistic expectations of the client for quality	24	49%	Low	19	39%	Med	6	12%	High	49	14	29%	Low	25	51%	Med	10	20%	High	49
Unrealistic expectations of the client for schedule/program	15	31%	Low	21	43%	Med	13	27%	High	49	11	22%	Low	24	49%	Med	14	29%	High	49
Unusual, non-standard or changed General Conditions of Contract	20	41%	Low	16	33%	Med	13	27%	High	49	15	31%	Low	22	45%	Med	12	24%	High	49
Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents	9	18%	Low	16	33%	Med	24	49%	High	49	7	14%	Low	24	49%	Med	18	37%	High	49
Unrealistic and difficult to construct designs	23	47%	Low	22	45%	Med	4	8%	High	49	11	22%	Low	23	47%	Med	15	31%	High	49
Estimating errors where client is responsible for taking out quantities	30	64%	Low	13	28%	Med	4	9%	High	47	20	43%	Low	21	45%	Med	6	13%	High	47
Slow client responses to queries and approval requests	9	18%	Low	23	47%	Med	17	35%	High	49	6	12%	Low	24	49%	Med	19	39%	High	49
Inappropriate type of contract for the nature and scope of works	29	60%	Low	18	38%	Med	1	2%	High	48	15	31%	Low	26	54%	Med	7	15%	High	48
Failure to provide sufficient resources or equipment for the project	29	60%	Low	14	29%	Med	5	10%	High	48	18	38%	Low	22	46%	Med	8	17%	High	48
Post-contract changes to design details or the scope of work	8	17%	Low	20	43%	Med	18	39%	High	46	9	20%	Low	20	43%	Med	17	37%	High	46
Persistent late payment	44	94%	Low	2	4%	Med	1	2%	High	47	25	53%	Low	13	28%	Med	9	19%	High	47
Unreasonable allocation of risk	12	25%	Low	22	46%	Med	14	29%	High	48	8	17%	Low	18	38%	Med	22	46%	High	48
Unclear allocation of risk	18	38%	Low	17	35%	Med	13	27%	High	48	9	19%	Low	24	50%	Med	15	31%	High	48
Unclear scope of work	22	46%	Low	19	40%	Med	7	15%	High	48	9	19%	Low	23	48%	Med	16	33%	High	48
Inadequate contract administration	23	48%	Low	19	40%	Med	6	13%	High	48	14	29%	Low	26	54%	Med	8	17%	High	48
Undue delay in processing claims for variations and EOT	13	27%	Low	23	48%	Med	12	25%	High	48	9	19%	Low	31	65%	Med	8	17%	High	48
Failure to hand over the site in time	37	77%	Low	10	21%	Med	1	2%	High	48	14	29%	Low	19	40%	Med	15	31%	High	48
Failure to provide all information known at the time of tender	24	50%	Low	17	35%	Med	7	15%	High	48	6	13%	Low	29	60%	Med	13	27%	High	48
Failure to issue certificates	34	71%	Low	11	23%	Med	3	6%	High	48	28	58%	Low	16	33%	Med	4	8%	High	48
Time consuming and expensive dispute resolution procedures	26	54%	Low	16	33%	Med	6	13%	High	48	10	21%	Low	19	40%	Med	19	40%	High	48
Differences in contract interpretation	10	21%	Low	20	42%	Med	18	38%	High	48	6	13%	Low	24	50%	Med	18	38%	High	48

Unrealistic assessment of valid claims	14	29%	Low	19	40%	Med	15	31%	High	48	6	13%	Low	22	46%	Med	20	42%	High	48
Differences in treating latent conditions	22	46%	Low	13	27%	Med	13	27%	High	48	9	19%	Low	24	51%	Med	14	30%	High	47
<b>Human Factors</b>																				
Incompetence of client's management staff	25	51%	Low	20	41%	Med	4	8%	High	49	8	16%	Low	28	57%	Med	13	27%	High	49
Inflexibility and intransigence of client's staff to understand contractor's position and consequences of decisions	10	20%	Low	28	57%	Med	11	22%	High	49	6	13%	Low	29	60%	Med	13	27%	High	48
Adversarial attitude of client's staff	26	53%	Low	20	41%	Med	3	6%	High	49	8	16%	Low	28	57%	Med	13	27%	High	49
Lack of communications	22	45%	Low	21	43%	Med	6	12%	High	49	12	24%	Low	21	43%	Med	16	33%	High	49
Client's staff not sufficiently trained in contract management	26	53%	Low	15	31%	Med	8	16%	High	49	12	24%	Low	28	57%	Med	9	18%	High	49
Reactive rather than proactive approach to dispute resolution	17	35%	Low	21	43%	Med	11	22%	High	49	10	21%	Low	26	54%	Med	12	25%	High	48
No sense of a team approach	24	50%	Low	17	35%	Med	7	15%	High	48	17	36%	Low	17	36%	Med	13	28%	High	47
<b>External Factors</b>																				
Latent conditions	18	37%	Low	22	45%	Med	9	18%	High	49	10	20%	Low	21	43%	Med	18	37%	High	49
Excessive bad weather	27	55%	Low	16	33%	Med	6	12%	High	49	16	33%	Low	23	47%	Med	10	20%	High	49
Industrial actions	44	90%	Low	5	10%	Med	0	0%	High	49	30	61%	Low	15	31%	Med	4	8%	High	49
Uncontrollable external events	34	71%	Low	12	25%	Med	2	4%	High	48	23	48%	Low	22	46%	Med	3	6%	High	48
Political interference	39	80%	Low	7	14%	Med	3	6%	High	49	32	65%	Low	11	22%	Med	6	12%	High	49

**Table D.8: Sources of disputes for both Clients and Contractors.**

<b>Sources of Dispute – Client perspective</b>	<b>Comment</b>
Contractual Factors	The majority of respondents rated Contractual factors as occurring at a low or medium frequency. The majority of the factors were rated as having a medium impact. 'Non performance in schedule/program', 'Unrealistic pricing at tender', 'Failure to provide sufficient resources or equipment for the project' and 'Not proceeding with work when a dispute arises' all rated as having a high impact.
Human Factors	The majority of respondents rated Human Factors as occurring on a low frequency. 'Reactive rather than proactive approach to dispute resolution' and 'Lack of Communication' were rated as having medium frequency by half of the respondents.  The majority of respondents rated all factors as having a medium impact.
External Factors	The majority of respondents rated all External factors as occurring at a low frequency as well as having a low Impact.
<b>Sources of Dispute – Contractor perspective</b>	<b>Comment</b>
Contractual Factors	The majority of respondents rated contractual factors as occurring on a low to medium frequency. One item, 'Errors, ambiguities, contradictions and inconsistencies and incompleteness in contract documents' was rated as a high frequency by approximately 50% of respondents.  The majority of respondents rated all factors as having a medium impact, with the exception of 'Unreasonable allocation of risk' and 'Time consuming and expensive dispute resolution procedures' which rated as having a high impact.
Human Factors	The majority of respondents rate human factors as occurring on a low to medium frequency, with most of these factors having a medium impact.
External Factors	The majority of respondents rate human factors as occurring on a low frequency, with most of these factors having a low to medium impact.

**Table D.9: Summary of sources of disputes for both Clients and Contractors.**

<b>Client Perspective</b>	<b>Response</b>	<b>Item</b>
Contractual Factors	low – med. frequency High impact	<ul style="list-style-type: none"> <li>▪ Non performance in schedule/program', 'Unrealistic pricing at tender</li> <li>▪ Failure to provide sufficient resources or equipment for the project</li> <li>▪ Not proceeding with work when a dispute arises</li> </ul>
Human Factors	low- med. frequency medium impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>
External Factors	low frequency low impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>
<b>Contractor perspective</b>	<b>Response</b>	<b>Item</b>
Contractual factors	low-med. frequency high impact	<ul style="list-style-type: none"> <li>▪ Unreasonable allocation of risk</li> <li>▪ Time consuming and expensive dispute resolution procedures</li> </ul>
Human factors	low-med. frequency medium impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>
External factors	low frequency low – med. impact	<ul style="list-style-type: none"> <li>▪ all factors</li> </ul>

# Appendix E – EXAMPLES OF GOOD AND BAD PRACTICE

**Table E.1: Examples of good and bad practice.**

<b>Organisation 1</b>		
	<b>3.1 Examples of Good Practice</b>	<b>3.2 Examples of Bad Practice</b>
1	<ul style="list-style-type: none"> <li>• Most subcontractors have best endeavours to complete the work. Suffering from lack of resources (personnel) with significant workload. In particular good subcontractors/suppliers are busy</li> <li>• Generally very little conflict between contractor/sub contractor provided early resolution of day to day disputes</li> </ul>	OH&S, environmental, quality management in relation to documentation/procedures varies widely – from sub-contractors - anything from very good to extremely poor. Requires continual management from Head Contractor.
2	did not complete	did not complete
3	Identified project was a collaborative contract where respective parties accepted the risks they were in best position to handle. Of consequence the project proceeded on time and budget	Client sold all risk even when in best position to manage. Did not advise/define all the risk that had been sold other than in generalities. Contract managed in the fashion that all risk sold.
<b>Organisation 2</b>		
	<b>3.1 Examples of Good Practice</b>	<b>3.2 Examples of Bad Practice</b>
1	Good open communication between management on both sides – regular meetings – issues addressed as they arise by persons who have the authority to make decisions	Management of a sub contractor company do not provide sufficient resources to the project and fail to take ownership of the resulting problem
2	Recognition by the client at the time of tender that it is inappropriate to pass on to the tenderer responsibility for all risks for matters that the contractor has no control over – for example risk of encountering contaminated ground when no data was available to establish ground conditions at the time of tender. Good practice was to either enable the contractor to recover these costs if they occur or to establish a provision sum to cover these costs. Early Contractor Involvement process at time of tender to enable the participants to openly discuss potential issues and clauses of concern with a view to reaching a mutually acceptable position on these prior to initiating the tender process. This is only useful however if the parties are prepared to be flexible in addressing the reasonable concerns of the other party.	<ul style="list-style-type: none"> <li>• The absence of a reasonable latent conditions condition.</li> <li>• Conditions which deny the contractor the opportunity to recover cost and time for acts and omissions of the client over which the contractor has no control.</li> <li>• Requirement that the contractor take responsibility for the incomplete or the incorrect design carried out by the client.</li> <li>• Defensive and biased response by clients to justifiable claims by the contractor.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Proactive approach to the project by the Client. Contract was a D&amp;C with onerous conditions, client/contractor relationship was strong.</li> <li>• Issues were discussed prior to going to letter/administration. Each party expressed their view and interpretation of the contract. This was not a formalized contract approach but was initiated by the client and contractor as a mature and open way of working.</li> <li>• Contractor continued to build the works and sort out administration and contractual formalities after the event. Payment was always on time.</li> <li>• Risk identification was shared and each party highlighted project risks.</li> <li>- open book contract.</li> <li>- Willingness to accept responsibility for mistakes/errors.</li> </ul>	<ul style="list-style-type: none"> <li>• Dogged compliance by clients administrative/contract staff with onerous contract conditions impact on relationships. Not interpreting the contract to suit the real project issues.</li> <li>• Expectation that the contractor takes all the risk and is always to blame for project issues.</li> <li>• poor communication and relationships result in lack of trust.</li> <li>• time bars on notification of delays and unwillingness to accept claims after the contractor became aware of an issue.</li> <li>• One where egos get in the way of the project.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Open and clear communication – verbal and written. Always confirm in writing to avoid doubt</li> <li>• Discuss key risks during tender stage and strategies to mitigate them</li> <li>• Pay on time</li> <li>• Clear scope of work and terms and conditions</li> <li>• Approach difficult issues in an open, constructive way to resolve them without going down the</li> </ul>	<ul style="list-style-type: none"> <li>• Poor communication</li> <li>• Verbal instructions / assurances</li> <li>• Poorly defined contracts</li> <li>• Terms of contract that do not anticipate / deal with latent conditions</li> <li>• Inconsistent terms and conditions</li> </ul>

	adversarial legal path	
5	Form strong teamwork element where it is seen and actively lived where support is provided: client to contractor to client. This has been proved to work	Alienating your contractor/client and not showing support and/or guidance has proven to exacerbate issues, problems and relationships.
<b>Organisation 3</b>		
	<b>3.1 Examples of Good Practice</b>	<b>3.2 Examples of Bad Practice</b>
1	Projects where the client, contractor, design consultants and subcontractors behave as an integrated team. We have done this on a number of projects where we have facilitated foundation workshops with the whole team to better understand each others key objectives and to explore ways of doing things better. Good practice requires a high level of trust between the parties, not just a 'nasty' contract to penalize poor performance.	The wrong form of contract, with inadequate documentation and clarity regarding scope of work and that puts as much risk as possible on the contractor, and then sets each party in an adversarial position to extract what they require from the contract.
2	A project that is 8 months ahead of schedule as a result of the Principal not micro managing the project, sees that clear concise decisions are made on the basis of good engineering practice. Any external influences by third parties, or internal Principal stakeholders are shielded from the project. His opinion is that if progress and momentum continues, the contractor will be in good health and such the project. This needs to be combined with open and honest communication.	A project that is very complex, with many external stakeholders, mainly government bodies such as departments, councils and internal client agencies where the Principal micro manages. The delegated authority between the Principals and the Principal's agent are not clear and lead to confusion about communication lines. The Principal's agent is a contractor and is uncertain about his authority. The Client has a capped budget that drives behaviour. A mismatch contract was written in which they believe all risk has been transferred regardless of their influence.
3	<ul style="list-style-type: none"> <li>• Avoidance of disputes through formal relationship management</li> <li>• Maintain a swings and Roundabouts list for use in final negotiations</li> <li>• Existing relationship and trust between parties.</li> </ul>	<ul style="list-style-type: none"> <li>• Non responsive to request</li> <li>• Kicking subbies when they're down out of frustration rather than helping the subbie do what is best for the project</li> </ul>
4	A clear scope of work, a simple contract, agreement on contract before work begins, contractor/subcontractor has a clear understanding of what is expected of them, a fair price, terms and conditions. Award contracts to companies that are aligned with yours or at least someone you can work with.	Scope of work not clearly explained litigious contract wording, work starts prior to agreement of contract conditions, contract awarded on price only. Contract awarded with the intention of making the contractor "behave" through use of the contract. Not dealing with claims quickly.
5	Parties communicate openly and attempt to find solutions to the problems prior to referring to the contract provisions /bringing the issue to dispute	Parties communicate by using written communication on any issues, and using contractual provisions as protection or leverage.
<b>Organisation 4</b>		
	<b>3.1 Examples of Good Practice</b>	<b>3.2 Examples of Bad Practice</b>
1	<ul style="list-style-type: none"> <li>• Clear &amp; concise channels of communications so that issues can be dealt with in a prompt manner and that unexpected events are kept to a minimum. Provision of quality documentation that has had extensive review prior to issue to Contractors so that variations and scope changes are kept to a minimum. Relationship building with contractors to ensure that common goals of both parties are achieved.</li> <li>• Award of contracts to suitably qualified and resourced companies that have a proven record of performance and ideally a previous working relationship with our company. Clear &amp; concise channels of communications so that issues can be dealt with in a prompt manner and that unexpected events are kept to a minimum.</li> <li>• Provision of quality documentation that has had extensive review prior to issue to Contractors so that variations and scope changes are kept to a minimum.</li> <li>• Relationship building with contractors to ensure that common goals of both parties are achieved.</li> <li>• Award of contracts to suitably qualified and resourced companies that have a proven record of</li> </ul>	<ul style="list-style-type: none"> <li>• Issuing 'for construction' documentation that has not been fully reviewed and co-ordinated with other disciplines/trades which would have the potential to create variations and delays to the Works.</li> <li>• Failing to administer the contract diligently which may expose both your Client and your company to claims and subsequent disputes. Generally relates to EOT's and payment issues.</li> <li>• Allow a lack of communication and exchange of information that does not allow contractors to optimise resource allocation and plan the works in a manner that would ensure a successful outcome.</li> </ul>

	performance and ideally a previous working relationship with our company.	
2	<ul style="list-style-type: none"> <li>• A collaborative 'best for project' approach;</li> <li>• Agreed communication protocols from the outset;</li> <li>• Strong and decisive leadership qualities from both parties;</li> <li>• Operating in accordance with the agreed communication protocols including immediate proactive resolution of any issues that may arise where for some reason protocols have not been followed;</li> <li>• Quality documentation where builder and/or subcontractor input has been provided and extensive reviews undertaken in order to minimize misunderstanding, variations and scope changes;</li> <li>• Relationship building workshops and activities to ensure that the objectives of both parties can be met;</li> <li>• Full and complete review of contractors/subcontractors' capacity and capabilities to ensure a meeting of the minds on expectations - i.e. award only suitably qualified and resourced companies with proven performance record;</li> <li>• Use of an industry recognized and accepted contract where risk allocation is appropriate to the task and the players.</li> </ul>	<ul style="list-style-type: none"> <li>• Issues left to stagnate and fester - no proactive action to resolve;</li> <li>• Poor communication or lack of it;</li> <li>• Indecisiveness by either party;</li> <li>• One sided contract terms and conditions;</li> <li>• Awarding of a contract due primarily to relationship without regard capability and capacity;</li> <li>• Issuing design documentation that has not been adequately prepared and/or reviewed;</li> <li>• Not regularly administering the contract .</li> </ul>
3	did not complete	did not complete

### Organisation 6

	3.1 Examples of Good Practice	3.2 Examples of Bad Practice
1	good and sustained communication, well defined scope of work, clear programming requirements, back to back with main contract, contractual questionnaire filled out	Opposite of above (respondent 1)
2	Correctional Facility <ul style="list-style-type: none"> <li>• Collaborative working arrangements between participants</li> <li>• Spirit of trust and cooperation created an open ethical and progressive relationship</li> <li>• Teamwork was encouraged</li> </ul>	Rail project <ul style="list-style-type: none"> <li>• Aggressive attitude of contractor's staff</li> <li>• Continued employment of WA 'Security of Employment Act' by contractor to recover payment for variation claims</li> </ul>
3	<ul style="list-style-type: none"> <li>• Client and subcontractor aligned on scope and project deliverables</li> <li>• Open and honest approach to project – immediately advise each other when things are going badly</li> </ul>	<ul style="list-style-type: none"> <li>• Poor scope definition</li> <li>• Attempts to use the contract to cover shortcomings in administration of subcontractors</li> <li>• Lack of trust, incompetent team members</li> </ul>
4	<ul style="list-style-type: none"> <li>• More often than not, a dispute is about a happening without time and / or budget allocation on a project. Mistakes are not often. Many caused by omission at time of tender or risks not clearly assigned or defined.</li> <li>• Good practice is to have the problem realized immediately by all parties to mitigate the problem as far as possible and joint willingness to share consequences. Each party able to accept its own responsibilities and willing to negotiate and allocate the outcome.</li> <li>• Change personnel through the process may sometime be necessary to achieve this goal.</li> </ul>	<ul style="list-style-type: none"> <li>• Inflexibility in approach to solve problem;</li> <li>• Unwilling to share responsibility or make changes;</li> <li>• Master and Servant mentality rather than business partnership;</li> <li>• Personality clash</li> </ul>

### Organisation 7

	3.1 Examples of Good Practice	3.2 Examples of Bad Practice
1	Subcontractor identified a clash within structural steel members and mechanical components during operation which was not identified in head contract drawings. Bringing it to our attention allowed the issue to be resolved with the client and designer before the steelwork items left the subcontractor's workshop, and thereby avoiding a costly onsite claim situation.	Subcontractor failed to implement a safety or quality plan, and staffed the work with inexperienced personnel. This led to a series of safety & quality incidents and the eventual removal of the subcontractor from site. Ambit claims for costs were submitted by the subcontractor which were required to go through a costly dispute resolution process for finalization.
2	During trade lettings ensure all items under the contract have been agreed along with the scope of works clearly stated and understood by both parties. However once entering into possible dispute issues entering into	Entering into a subcontract agreement with an unclear scope of works. If the subcontractor does not understand or is unclear about his full scope of works it sets the ground for a turbulent future. The

	discussions with the subcontractors as early as possible is always beneficial. Mitigate any dispute by tabling all the issues between the parties and working towards a mutual agreement before the issue escalates. Encourage the subcontractors to take ownership of the project and the programme. Work towards establishing a relationship based on a mutual goal for completion on time. Unrealistic dates and "pounding" the subcontractor from commencement through to completion will only create disfunction. Though this may be perfect world idealism it is not completely unattainable.	subcontractor will most likely claim for items they think they are entitled to in comparison to the contractor deeming these items to be included. The subcontractor taking a stiff stance on the issue once again creates a rocky road towards dispute.
3	Where subcontractor has open and honest communication with us (client) before submitting claims (and is honest about the situation). This enables us to work with them to produce an outcome that is satisfactory to both parties.	Constantly submitting contractual notices or claims
4	Cooperative relationship where communication between the parties is excellent and where the roles and expectations are well understood. In depth knowledge of the strengths and weaknesses of both parties is required.  Excellent understanding of outputs required and common goals for the project. Good relationships between the parties.	<ul style="list-style-type: none"> <li>• Poor understanding of the project goals and each parties strengths /weaknesses.</li> <li>• Poor communications between parties that lead to quality issues or errors.</li> <li>• No common goals between the parties.</li> <li>• Lack of relationships that result in small issues escalating into much larger issues.</li> <li>• Specification / Contract driven decision making rather than focus on outcomes.</li> </ul>
5	<ul style="list-style-type: none"> <li>• A clear understanding of the contract and scope of works.</li> <li>• Development of relationships and understanding of needs.</li> <li>• Submission of deliverables on time.</li> <li>• Adequate resources and backup allocated to the project.</li> <li>• Continual review and update of programme and method.</li> <li>• Clean, neat, well planned and safe site.</li> <li>• Addressing risk issues early and closing out.</li> </ul>	No evidence on attendance of above points
6	conversant with BCA	Water tests not sufficient (leaks)
<b>Organisation 8</b>		
	<b>3.1 Examples of Good Practice</b>	<b>3.2 Examples of Bad Practice</b>
1	<p>1) Contractor employs skilled personnel and works to deliver contract undertakings within contract time, with specified quality, and to payments in the contract, without 'unexpected' variations.</p> <p>2) Contractor has adequate and demonstrated controls on profit and time [cost control is not its saviour]. Contractors who will not spend a dollar to save ten always run themselves and their client into trouble.</p> <p>3) Contractor appreciates that when a project looks like it is going 'bad' it is in the Contractor's own interests to pour in experience and resources to complete the work, not ease back on resources or stop work.</p> <p>4) Contractor realises that if it is behind time when a third of the construction period has elapsed, then it will complete after the Date for PC and does not make EOT claims to avoid the problem.</p>	<p>1) Contractor undertakes \$20 million contract in 18 month contract period, but has 7 changes of project manager over the duration – contractor not only expects not to loose money on the contract but also does not know what each change of manager has cost it (direct costs, momentum, etc).</p> <p>2) Contractor arrives on site to construct contract for \$20 million steel bridge of complex architectural design with a crew that has only ever built simple concrete plank bridges, and when confronted by the prospect of significant loss on the project, plays the 'political card' to try to discredit the Principal's staff and the Superintendent.</p> <p>3) Contractor employs staff on the contract it proudly says "has made us a lot of money through claims and disputes on previous projects" and then fails to deliver half the project in the full contract period through its own lack of resources and inexperience. Then it gets abusive to the Principal and Superintendent when claims are refused.</p> <p>4) Contractor expects to make a profit irrespective of circumstances, rather than earn a profit (profit is not a mere percentage of turnover, it is dependent upon a properly priced tender, skilled application of resources, proper controls on site, minimum rework, etc etc).</p>
2	Contractor submitted 3 claims. They gave us the draft	The Contractor bid low on a \$30m job. From the

	<p>claims, we assessed them and responded in draft. We had a meeting with their Project Manager and the Superintendent to discuss issues with the documents. Came to an agreeable solution and finalized the paperwork. This was for a contract of about \$10m, and claims of only about \$160k.</p> <p>During the contract issues were sorted out progressively. A relationship management approach was used on the project.</p>	<p>start it was a battle to achieve quality. The project also struggled with high staff turnover. The claims submitted totalled over \$8m and were settled after years of meetings and discussions. The contractor sold their business during the discussion phase and faced personal monetary loss. It got very personal at times which made it difficult to address the contractor's issues without emotion.</p> <p>The claims were finally resolved for about \$2m (about \$1.8m more than they should have got!!!)</p>
3	Discuss potential claims at earliest opportunity and involve clients in decisions and monitor costs throughout issues. Agree in principal of who is responsible up front.	Lack of clarity on claim, toe in the door, racking up costs, changing story to support claim, manipulative interpretation of contract, no compromise.
4	<ul style="list-style-type: none"> <li>• Proactive approach to quality and plan to manage unsuitable materials results in efficient and effective treatment</li> <li>• Alternative construction methodology (e.g. driven piles resulted in savings to client and contractor)</li> </ul>	<ul style="list-style-type: none"> <li>• Potential savings from scope reductions lost due to poor execution, and management of the change</li> </ul>
5	<ul style="list-style-type: none"> <li>• Good standard contract documentation – "base" documents</li> <li>• Effective guidance on selection of appropriate delivery system and contract type</li> <li>• Suite of contract types to suit varying delivery strategies</li> <li>• Use of Dispute Resolution Boards to resolve disputes</li> <li>• Use of prequalification systems to ensure only competent contractors tender projects</li> <li>• Establishment of a Superintendent Community of Practice to share knowledge and exchange experiences relating to contract administration to drive consistent decision making and raise standard of contract administration</li> <li>• Centralised Contracts Branch to provide advice, leadership and guidance on contractual matters</li> <li>• Main Roads is an informed buyer – has retained significant "in house" technical expertise</li> <li>• Long standing established relationships with many contractors/suppliers</li> <li>• Use of non-price selection criteria which considers past performance and relationships (amongst other things)</li> </ul>	<ul style="list-style-type: none"> <li>• Poorly drafted modifications to standard contract documents and additional clauses which result in ambiguities</li> <li>• Poor designs or designs which don't give adequate consideration to constructability</li> <li>• Poor quality contract documentation including excessive use of Notices to Tenderers which causes difficulties in pricing the job and effective use of the contract documents after award.</li> <li>• Lack of documented precedents for contractual decisions within Main Roads – results in inconsistent decisions on different projects</li> <li>• Lack of mentoring for younger engineers involved in contract administration</li> <li>• Political drivers resulting in unrealistic project timelines</li> <li>• High level of accountability for delivery on time and within budget but less accountability for other aspects of performance including quality and long term durability</li> </ul>

## Organisation 9

	3.1 Examples of Good Practice	3.2 Examples of Bad Practice
1	<p>The managing contractor type of contract is very much built around relationships. There is a good faith clause. Partnering workshops are held. The right people are chosen by each of the parties. For large MC contracts the Principal's Representative works alongside the MC. Nevertheless it comes down to good, open communication and working together to achieve outcomes. Organisation has not had a dispute for many years on its MC contracts. The MC contract though continually developing in the interests of contractors and clients is well known to industry and is well received by industry.</p>	<p>Disputes occur when there is tension and this can be from a whole heap of reasons - poor documentation, projects not adequately resourced, poor communication, adversarial approach by contractor, lack of skilled sub contractor resources (poor workmanship), unrealistic project timeframes, underpriced project with following intent to cut losses by cutting corners in delivery.</p>
2	<p>The current Managing Contractor contract delivery provides excellent flexibility to address issues as they arise and allows early involvement of a builder to input in key areas of buildability, programming and market conditions.</p> <p>It provides an opportunity for the builder to become aware of the risks to the project and fully understands them at an early stage by working with the client team and the design team before he is fully committed to his costs.</p>	<p>In a Managing Contractor type delivery (similar to a D&amp;C), the client had certain expectations in relation to the type and quality of the design that were not clearly defined. At tender the contractor and his design consultant allowed for a lower level of type and quality but did not make it clear at the time assuming they would proceed with the lower quality. During briefing meetings with the contractor and his design consultant these client expectations were made known.</p> <p>The contractor proceeded to design the project to the higher standard without 'disputing' the matter</p>

		<p>at the time. Towards the end of the project a major claim was submitted for this.</p> <p>This is an example where having only a broad scope defined led the tenderer to assume certain things without clarifying them – risks were not clearly defined. This was then accentuated by not raising the ‘dispute’ at the time when it could have been settled with a minimum impact – leaving it to the end maximized the impact</p>
3	<ul style="list-style-type: none"> <li>• Major hospital project (400+ beds) on Greenfield site – completed 2001. Managing Contractor (Design Develop and Construct) with partnering principles embodied in contract. Strong team approach with experienced personnel representing contractor, Principal's Rep and local client. Regular on-site meetings of client/contractor teams and higher-level Steering Group. Problems identified early and resolved in a spirit of cooperation.</li> <li>• Each of the major representatives were on the project from inception to completion.</li> <li>• Strong working relationship between Client and Principals' Rep which expedited client approvals thereby avoiding delays</li> <li>• Project completed on time and no disputes between client/contractor.</li> </ul>	<p>Same project as above. Managing Contractor (MC) packaged work with one very large interior fitout subcontract covering a number of trades. Subcontractor was the local entity of large multi-national company which lacked appropriate management and performed poorly. Resulted in major dispute between contractor and subcontractor. Successful outcome despite lack of performance of this crucial sub contractor</p> <p>Essentially because of the large size and scope of package, MC lost control of the subcontractor and performance. MC made the packaging judgement at fee tendering stage which had impact of lowering MC management fee at expense of increased Trade Cost and significant increase of delivery risk.</p>
4	did not reply	did not reply
5	<p>Good Practice has been shown by a number of contractors who have come to believe that “disputes” are not in the interest of any party, and have actively changed their culture to min or eliminate disputes, generally thru open communications.</p>	<p>Bad practice still remains the domain of some contractors who openly seek to manipulate the system, thru such matters as changing materials or design without any prior discussion or approval, generally because the alternative is seen as cheaper option.</p>

## Organisation 10

	3.1 Examples of Good Practice	3.2 Examples of Bad Practice
1	<ul style="list-style-type: none"> <li>• Fast turnaround of RFI's,</li> <li>• Pro-active approach to any issues incl design, methodology etc.</li> <li>• Prompt decision making.</li> <li>• Payment on time within legislative requirements,</li> <li>• Good understanding of the contract, including design and specifications;</li> <li>• Getting the design and spec right before it goes to tender – reduce delays in design clarification and variation cost and agreeing process</li> <li>• Ensure the components of the design are properly co-ordinated and well design managed.</li> <li>• Reasonable approach to quality such where the cost to rectify is not that great that it affects the outcome – Super's decision.</li> <li>• Setting up a reasonable and achievable program with sensible float times and recognition of potential latent condition and weather expectations.</li> </ul>	
2	<ul style="list-style-type: none"> <li>• Team approach taken by all. Stakeholder, client, designer, and builder all wanting the same result. Outcome driven.</li> <li>• Informed client with ability to realize the necessity of solid design fee to save on the construction stage of a project.</li> <li>• Team approach to meet all deadlines along the way.</li> <li>• Upper management willingness to support decision made at project level.</li> <li>• Openness of communication with client, stakeholder, builder, designer to achieve the best possible project result.</li> </ul>	<ul style="list-style-type: none"> <li>• Late agreement of variations and their costs.</li> <li>• Late agreement and assessment of EoT's</li> <li>• Bad and irregular communication processes ie no meetings etc</li> <li>• Hiding away from bad news –get it out and agreed asap.</li> <li>• Not recognising the affect of decisions and variations on the contractor.</li> <li>• Changing the scope of the works such that it becomes unmanageable.</li> <li>• Ignoring the contractors issues.</li> </ul>
3	<ul style="list-style-type: none"> <li>• 14 week programme had to be finished for national tournament</li> </ul>	<p>When one part of the team become focused on achieving a result in their interest and their interest</p>

	<ul style="list-style-type: none"> <li>• Tight timeframe for project with difficult stakeholders, poor design and latent conditions. The team's objective was to complete the project on time. We worked as a team focussing on open communication, good planning and quick decision making process. National tournament was held and was a success.</li> </ul>	only, without any care or concern on project as a whole.
4	<ul style="list-style-type: none"> <li>• Latent conditions (groundwater) affecting bored piers could have been decided as a contractor risk because of several notes to that effect in the specification. However the solution required a re-design, a delay and increased cost which was accepted as a variation and cost claim because to do other wise would have been unreasonable, and was likely to impact on other issues that would arise later in the contract.</li> <li>• A contractor failed to fully comply with spec for acoustic construction. The spec did not actually indicate that the construction was to have testable acoustic qualities.</li> <li>• Rectification of the work would have involved delay and cost to the contractor. The client had the work inspected by the consultant who advised that the work still provided adequate acoustic protection. The work was accepted and a dispute was avoided.</li> </ul>	Project manager changed on job, contractor engaged under purchaser provider system and the contractor was not held accountable for works or costs. Major issues with claims and variations and the contractor abandoned the site during the works and I could not do anything under the contract.
5	Good Practice is understand the scope of works, expectation and continued communication	<p>A wet weather delay claim was denied by the Superintendent by the "time bar" provision of the contract.</p> <p>While legally permitted under the contract, to do so was punitive and unfair. The contractor had to make up the time and had less time to deal with other delays for which he had no entitlement to an extension of time. He became inclined to submit other delay claims to also recover time, some of which attracted delay costs as well.</p> <p>A contractor over- excavated due to an incorrect interpretation of a drawing, which did not clearly identify ambiguous dimensions. The contractor then submitted an inflated cost claim and demanded agreement before doing extra backfill work.</p> <p>Resolution of the lump sum price took several weeks and delayed the critical path. In hind-sight, rates could have been agreed or even determined by the Superintendent for back-fill work, and risk to both parties of cost and time controlled.</p>
6	<ul style="list-style-type: none"> <li>• Ensure at pre-award meeting that the contractor is aware of the full clients expectations in respect of extent, quality and delivery date of the project. Ensure that you can remind or refer to these commitments by the contractor if need be, during the course of the contract.</li> <li>• Provide all clear concise documentation as soon as possible on award of contract.</li> <li>• Be fair and reasonable with time and price claims, ensure you can substantiate approvals or rejections and answer as early as possible to avoid latent expectations from the contractor.</li> <li>• Give practical advice and assistance where possible and use any special expertise that you might have as the client in your area of expertise.</li> <li>• Openness and feed back to the contractor at all times about quality, time and progress of the works.</li> <li>• Allow communication to flow between specialist trades and consultants.</li> </ul>	Bad practice is lack of responsiveness to act, not willing to work to a solution and words don't support actions
7	Good practice for all elements of construction is a properly resourced project who can implement their Health and Safety plan and Quality Management Plan throughout the construction duration. The most successful sites have a dedicated Site Manger, Site Engineer, Foreman and QS. With this level of resource	Doing none or the reverse of the above (S3.1 No 6)

	the site tends to be more pro-active with a far higher level of quality and safety management. Any contractual issues are raised early and are more likely to be resolved throughout the contract period.	
8	Involved constructor in design process where time and money and cost were significant drivers. Able to discuss design Vs constructability to get best result	Bad practice tends to arise when the site is badly resourced which leads to reactive management. This can then lead to poor quality, planning and on to unacceptable claims which tend to be raised at the end of the contract.
<b>Organisation 11</b>		
	<b>3.1 Examples of Good Practice</b>	<b>3.2 Examples of Bad Practice</b>
	While operating under a traditional D&C contract, both parties being able to adopt a “partnering” approach to allow resolution of issues before they escalate to contractual problems. Maintaining an open dialogue, regardless of the nature of the issues being discussed.	Adversarial approaches based on the historical tendency for contracts to be managed this way – from both perspectives. Failure to attempt to understand the objectives of the other party.
	Collaborative working all levels is essential; having a co-located (Client Contractor) or integrated team improves communication and joint understanding of issues that can then be dealt with proactively with everyone understanding each others interests. This eliminates issues being sat on which end up escalating in size and eventual cost.	Segregated team that only communicates through the official contractual methods.
	Partnering arrangements Collaborative relationship contracting Pseudo alliance principles	Overall we haven’t experienced major disputes, however throughout any contract there are disagreements between contractor and client.
	<ul style="list-style-type: none"> <li>• Contractor’s staff try to understand client’s needs, priorities.</li> <li>• Contractor seeks to understand reasons behind contract conditions.</li> <li>• Contractor values client’s expertise.</li> <li>• Both parties seek to find win-win solutions.</li> <li>• Both parties seek to find suitable level of collaboration, relevant to job.</li> <li>• Client does not act as “policemen”</li> <li>• Client seeks to understand contractor’s aims/ambitions.</li> <li>• Client understands/accepts that one of the contractor’s primary objectives is to turn a profit.</li> <li>• Client seeks to minimize barriers to contractor’s progress – external and from client itself.</li> <li>• Potential areas of disputes recognized early and works measured (and costs mitigated) to avoid arguments over quantum – argument can be confined to principle only.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor does not accept responsibility for performance of subcontractors.</li> <li>• Contractor does not understand contract intent.</li> <li>• Contractor’s staff not aware of contract specification requirements.</li> <li>• Contractor does not pass on information to subcontractors.</li> <li>• Client assumes there is only one possible interpretation of contract documents – the clients way.</li> <li>• Client pounces on every nonconformance by contractor and does not recognize good performance.</li> <li>• Client uses (abuses?) full time allowed for reviews.</li> <li>• Client does not actively seek to minimise barriers to progress.</li> <li>• Parties personalize disputes and/or allow them to affect relationship, communications, progress.</li> </ul>
	<ul style="list-style-type: none"> <li>• Joint risk workshops between clients, contractors, designers and subcontractors to identify best way forward</li> <li>• Agreement to proceed with a variation on the basis of identifying most cost effective solution irrespective of who is liable</li> <li>• Agreement in relationship management to concentrate on the issues, given resolution management and processes for interaction and dispute handling</li> <li>• Joint approach in dealing with service facilities to achieve best possible outcome</li> </ul>	<ul style="list-style-type: none"> <li>• Failure to disclose subcontractor non conformance</li> <li>• Lack of knowledge sharing on work problem issues: <ul style="list-style-type: none"> <li>o Traffic management</li> <li>o Working beyond shutdown time limits</li> </ul> </li> <li>• Lack of consultation in dealing with third parties <ul style="list-style-type: none"> <li>o Reaching agreement that have downstream impacts.</li> </ul> </li> </ul>

# Appendix F – SUGGESTED STRATEGIES FOR AVOIDANCE OF DISPUTES

**Table F.1: Suggested strategies for avoidance of disputes.**

<b>Organisation 1</b>	
1	<p>Traditional D&amp;C contracts: Clients wary of not getting what they paid for. When too descriptive becomes an argument when contractor changes design. When items are deleted, client wants money back. When additional items required during design development – that’s a contractor’s problem.</p> <p>Suggestion: D&amp;C should not be too descriptive. Alternative, ECI stage to work through with client/contractor to ensure client gets what he wants.</p>
2	<p>This is largely dependent on the type of contract. A strategy would be to involve senior representatives of each organisation who are not directly involved with project or dispute to meet and agree on a way forward. This may include the advice and guidance of an independent person to provide initial input before the issue escalates to a formal dispute.</p>
3	<ul style="list-style-type: none"> <li>• Assure yourself that the selected contractor can perform the task profitably for the price accepted - not just that he has the resource/capacity to complete the task;</li> <li>• Give/keep risk to the person most appropriate to manage it. Don’t sell risk to people not skilled to manage it and where you are in a better position to manage it;</li> <li>• Treat people as you would expect to treat you;</li> <li>• Put the contract in the drawer never to be read.</li> </ul>
<b>Organisation 2</b>	
1	<ul style="list-style-type: none"> <li>• Senior management set ground rules and expected behaviour</li> <li>• Regular structured communication / meetings</li> <li>• Willingness to resolve issues.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Establishment of an issues reference group outside the project team (ie senior representatives of both parties to review matters that could not be resolved at project level).</li> <li>• Greater use of provisional sums or cost-reimbursable items where the cost cannot be accurately determined at the time of tender.</li> <li>• More equitable allocation of risk in the conditions of contract. Often the tenderer that is successful is the one that undervalued the cost of a risk relative to another tenderer – this often leads to the contractor seeking ways to claim back the loss from the client in some way.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Pre-contract variation alignment workshops to determine what constitutes a variation. This is run by creating some scenarios of what may go wrong.</li> <li>• Shared risk pot (\$) for project risks and identify owners for risks.</li> <li>• Open book policy</li> <li>• Do not time bar claims</li> <li>• Create a performance based incentive pot for Contractor performance.</li> <li>• Do not select the contractor on lowest price.</li> </ul>
<b>Organisation 3</b>	
1	<ul style="list-style-type: none"> <li>• Promote a relationship management frame work to improve communication and understanding between the parties</li> <li>• Facilitate regular meetings to address and resolve issues in a timely manner</li> <li>• Better define the project requirements and the risks that each party is to manage prior to contract execution</li> <li>• Allocate risk to the party that is best placed to manage it</li> <li>• Adopt a delivery model that best suits the project complexity and requirements</li> </ul>
2	<ul style="list-style-type: none"> <li>• Decisions must be based on good engineering principles.</li> <li>• Clients need to be educated in contract delivery</li> <li>• Utilize Project Management Team (External to project team – corporate management) to resolve issues that can not at site.</li> <li>• Peer or dispute resolution team to provide project team advise on claims entitlement to reduce the effort to resolve or provide guidance to resolve</li> <li>• More effort in contract stage to agree on appropriate risk profile, instead of the huge effort currently to write contracts that close holes in the contract, this day contracts seem to be patchwork of all the lessons learnt (that is were claims occurred previously) not resolving the basic issue of whether it was appropriate to begin with.</li> <li>• More Clients involvement during tender phase to understand exactly what they need and what they wish, and understand the implications of the wish.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Have a third party legal advisor train both parties in their obligations and rights under the contract</li> <li>• Ensure the client understands that when the contract requires a notice to be given, the contractor needs to issue then – it is not an act of aggression.</li> <li>• Put a pool of money in which is released against mutual KPIs</li> <li>• Formal relationship management process</li> </ul>

4	<ul style="list-style-type: none"> <li>• As a client understands there is a 'base' price for the work. If you have awarded a contract purely on price and that price is much lower than the other competition – expect an argument</li> <li>• Deal with disputes quickly; the longer they take to resolve, the more protracted they become</li> <li>• Act fairly and fairly is not necessarily in line with acting in accordance with an onerous contract</li> <li>• Build a good business relationship from the start so there is an understanding of each other's views before and if a dispute occurs</li> <li>• Keep contracts as simple as practical, don't write in 'smart' clauses for the purpose of risk avoidance or other reasons</li> <li>• Ensure you have a clear scope. In a design and construct contract – there is always going to be an element of work that is not built or designed in a way that you wanted it. Accept this</li> <li>• If you are passing on a lot of risk through the contract conditions, allow for more contingency than otherwise</li> <li>• Work with companies you can have a business relationship with</li> <li>• Understand that profit is an essential part of business.</li> </ul>
5	<ul style="list-style-type: none"> <li>• Open communication / no hidden agenda;</li> <li>• Verbal instead of Written communication;</li> <li>• Seeking "practical" solution instead of using contractual protection;</li> <li>• Acting early and proactively rather than wait and react to other party moves;</li> <li>• avoiding rapid escalation of the issue to higher level (ie people detached from the issue in hand)</li> </ul>
<b>Organisation 4</b>	
1	<ul style="list-style-type: none"> <li>• ensure documentation is of a high standard;</li> <li>• open communications between parties;</li> <li>• relationship building;</li> <li>• payment strictly within the terms of the Contract;</li> <li>• issue payment schedules promptly and comply with the Building &amp; Construction Industry Payments Act;</li> <li>• pre-ascertain quality standards (via samples, prototypes etc) and ensure works are carried out in accordance with those agreed standards;</li> <li>• ensure access to carry out the Works is given in accordance with the agreed program</li> <li>• provision of sufficient supervision;</li> <li>• plain English contracts;</li> <li>• comprehensive pre-contract award briefings for all packages;</li> <li>• clear and concise scope of works;</li> <li>• establish effective tender evaluation processes for all contracts to ensure suitably qualified contractors are selected.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Ensure tendering and evaluation processes are exemplary and to industry best practice to ensure both parties are fully aware of their responsibilities under the contract;</li> <li>• Ensure comprehensive pre award briefings;</li> <li>• Develop a relationship agreement via workshops and other events where the 'rules of the game' are generated and agreed, relationship based rather than contractually based;</li> <li>• Ensure documentation is best practice;</li> <li>• Ensure that scopes of works are clear and unambiguous - clarify with all parties to ensure understanding;</li> <li>• Ensure regular meetings of the parties at the coal face as well as at senior management level.</li> </ul>
3	<ul style="list-style-type: none"> <li>• commence discussions on disputes early;</li> <li>• contractor showing good faith by continuing to perform the work under contract;</li> <li>• set up a separate dispute resolution group which is not involved in the day to day running of the project in order to take the heat off the discussions.</li> </ul>
<b>Organisation 6</b>	
1	<ul style="list-style-type: none"> <li>• Good communication</li> <li>• Open discussion</li> <li>• Well defined scope of works</li> <li>• Good contractual documentation</li> <li>• No correspondence by email</li> <li>• Meeting of senior management (Principal/contractor)</li> </ul>
2	<p>Employment of non-intrusive processes such as :</p> <ul style="list-style-type: none"> <li>• any claim, dispute or difference relating to the terms of contract or arising out of the project should first be referred to a project's management group formed at the time of contract award. Any matter that remains unresolved should then be referred to the Executive of the parties for final resolution</li> <li>• Encourage the development of a collaborative working arrangement between parties. This spirit of trust and cooperation should discourage confrontational attitudes</li> <li>• Direct negotiation between parties without intervention by a third party</li> <li>• Ask a third party (mediator) to make an assessment of the parties' contractual entitlements.</li> </ul>
3	<p>For D&amp; C:</p> <ul style="list-style-type: none"> <li>• Clients don't accept (price?) they think is defective</li> <li>• Subbies don't set traps for clients</li> <li>• Once project is awarded, open book the estimate and future variations</li> <li>• Client and subcontractor participate in joint risk management sessions</li> </ul>
4	<ul style="list-style-type: none"> <li>• Supply adequate staff training in contract administration</li> </ul>

	<ul style="list-style-type: none"> <li>• Provide understanding to staff about the impact of a formal dispute on a project (real time, money and efforts in preparation and process)</li> <li>• Careful selection and engagement of personnel in key positions (avoid personality clash)</li> <li>• To encourage doing things preventively rather than reactive.</li> <li>• Real teamwork – prepare to assist other parties to achieve common goal</li> <li>• Have clarity in scope and responsibility, avoid risks which cannot be identified or measured (realization more on the skills and expertise of other contracted parties rather than liability)</li> <li>• Always look for suitable options and alternatives for fitness of purpose.</li> <li>• More communication less barriers</li> <li>• Problem solving be at the lowest level</li> <li>• Not all legal advice are correct</li> <li>• Allow sufficient contingencies to match project risks</li> <li>• Not afraid to seek extra fund to deal with the unexpected</li> <li>• Use the contract flexibly for purpose of the Agreement to achieve the common goal.</li> </ul>
<b>Organisation 7</b>	
1	<ul style="list-style-type: none"> <li>• Clients to set project budgets via consultation with construction companies rather than design consultants. Realistic budgets from the outset would help reduce the pressure the client brings to bear on his representative to find reasons to reject valid claims and the resultant disputes.</li> <li>• Better training of clients and their reps on the interpretation and operation of contracts.</li> <li>• Clients reps to have actual private company construction experience in the type of work of that project, rather than only design experience or public works construction experience.</li> <li>• Separate the link that often exists between the designer and the client's rep (who is often the designer). Instituting a requirement that the designer may not be the client's onsite rep would go a long way to overcoming disputes that arise out of the designer defending his design in front of the client so as to ensure future work.</li> <li>• Treating ALL inclement weather as a valid claim (with costs) rather than only 'excessive' inclement weather. This would enable the contractor to take the risk \$'s out of the tender, with the client being the one to make a financial allocation for this risk in his budget. Why should the contractor be forced to bear the costs for an event he has almost zero control over, and would allow them to focus on overcoming the delay rather than preparing for battle.</li> <li>• Have the client put more budget towards staffing the administration team. Often a client's rep is a team of only handful, that is expected to process the paperwork from the contractor's team that numbers in the many.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Create a strong working relationship between all parties. This can be difficult when in certain contractual circumstances.</li> <li>• Sign off a final scope of works before entering into final contractual agreement.</li> <li>• Clearly state and provide clear understanding for any special contractual conditions. Eg. Latent, site access, work hours, staging, etc.</li> <li>• Set up schedules of rates under the contract to be used for the basis of variations. Pricing is therefore somewhat set and disputes mitigated when agreeing variation pricing.</li> <li>• Carry out regular meetings to raise and discuss current issues with a timely deadline for a resolution. Obviously any resolution is based on a mutually agreed outcome.</li> <li>• Overall early identification of possible problems and working through with all parties towards resolving in a timely manner.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Communication – open and constant communication in both directions between contractor and client</li> <li>• Clear delineation of scope before award of contract.</li> <li>• Both parties have to want to avoid disputes (but not at the expense of the other parties rights).</li> </ul>
4	<ul style="list-style-type: none"> <li>• Establishment of relationships at various levels of each organization</li> <li>• Be outcome focused</li> <li>• Understand what outcomes are required: what are the project goals</li> <li>• Have established dispute resolution procedures with levels of authority for relevant players</li> <li>• Use partners that Have a proven track record, not necessarily the lowest price.</li> </ul>
5	Did not complete
6	<ul style="list-style-type: none"> <li>• Resolve every issue immediately - don't leave until end of project;</li> <li>• Ensure scopes of works are fully understood and agreed prior;</li> <li>• Fully document "Start up Meeting" to all parties' expectations</li> </ul>
<b>Organisation 8</b>	
1	<ul style="list-style-type: none"> <li>• We must accept that it is not possible to avoid all disputes – target is to minimise the number, and then efficiently deal with those that occur (if all disputes could be avoided the marriage contract would never break down).</li> <li>• Carefully select contracting party based upon technical capacity, financial capacity, personnel and experience.</li> <li>• Then carefully prepare the tender, design, contract documentation, and the contract arrangements.</li> <li>• Then apply the 'reasonability test' to all that is done (firm, fair, but friendly).</li> <li>• After that, agree to disagree when necessary and move on – return to the disagreement only when it will not detract from the on going relationship, or contract work is complete.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Have well skilled project managers and superintendents.</li> </ul>

	<ul style="list-style-type: none"> <li>• Take the time to make sure that the contract documents are done well/accurately.</li> <li>• Manage variations and claims within a short time frame to stop long lingering issues from creating relationship problems.</li> <li>• Set up procedures to manage issues and dispute resolution.</li> </ul>
3	<ul style="list-style-type: none"> <li>• co-location of teams to promote verbal communication</li> <li>• careful selection of contractor's key staff during tender period</li> <li>• clear escalation process</li> <li>• clear contract documents</li> <li>• thorough geotechnical and PUP investigations prior to contract</li> <li>• contractor pre-qualification considering claims attitude.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Both client and contractor sign off on any change management plan to ensure the scope and details are agreed</li> <li>• Joint development of risk management plan</li> <li>• Client/contractor administrator to review and comment on proposed construction methodology.</li> </ul>
5	<ul style="list-style-type: none"> <li>• Use of appropriate contract type/delivery method</li> <li>• Early contractor involvement in design development</li> <li>• Equitable allocation of risk</li> <li>• Establishing and maintaining high quality and lasting relationships</li> <li>• Operating an effective prequalification system</li> <li>• Establishing and operating a community of practice for contract administrators to exchange information and share knowledge/experiences</li> <li>• High quality designs and contract documentation – minimize ambiguity</li> <li>• Documented precedents for contractual decisions made on Main Roads projects – as a guidance document for superintendents</li> </ul>
<b>Organisation 9</b>	
1	<ul style="list-style-type: none"> <li>• good faith clauses,</li> <li>• no price criteria for selection of contractors (methodology and resources),</li> <li>• partnering workshops as contractor selection process,</li> <li>• partnering charters,</li> <li>• project control group,</li> <li>• open communication,</li> <li>• non adversarial resources by all parties,</li> <li>• willingness to address issues immediately,</li> <li>• PQC reports.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Clear allocation of risks between contractor and client</li> <li>• Clearly defined scope</li> <li>• Highly enunciated communications strategy between contractor and client worked out at commencement of project together with regular review of its 'health' over the term of the contract</li> <li>• Commitment by client to pay reasonable costs to contractor ie not go for lowest cost tender</li> <li>• The previous leads onto tendering for best value for money with non-priced criteria having a greater weighting than priced criteria</li> <li>• Select contractors who are appropriate for the project in terms of financials and experience</li> <li>• Have processes in place that identifies areas of disputes at the time they occur and encourages both the client and contractor to address the issue in a timely manner</li> </ul>
3	<ul style="list-style-type: none"> <li>• Each party appoint experienced competent personnel with a partnering mindset</li> <li>• Undertake early team building exercises to establish relationships</li> <li>• Regular meetings on site of the project team and key decision makers</li> <li>• Appoint/ provide continuity of key personnel</li> <li>• Recommend relationship established between parties not just at project team level but also at Exec level to provide a level of "Steering" support to project team.</li> <li>• Ensure the form of contract matches the project risks and matches industry "appetite" at the time.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Good paper work,</li> <li>• good communication,</li> <li>• contractor/builder wants somebody to listen to him and not just be ignored.</li> </ul>
5	<ul style="list-style-type: none"> <li>• Improved communications between parties</li> <li>• Better training of staff (at all levels of contract – Subcontractor, Contractor, Client, Professionals)</li> <li>• Better understanding of links between contract admin and budget impacts (on all levels)</li> </ul>
<b>Organisation 10</b>	
1	<ul style="list-style-type: none"> <li>• Get the design, spec, quantities accurate prior to tender.</li> <li>• Get the tender and agreed contract right – if u are too low then withdraw.</li> <li>• Keep variations to a minimum.</li> <li>• Be prompt and accurate with information.</li> <li>• Communicate regularly – be open and honest.</li> <li>• Have sensible contingencies with time and budget.</li> <li>• Don't be greedy.</li> <li>• Understand that we don't get anything for nothing – be reasonable.</li> <li>• Be hard on the problem – not the people.</li> </ul>

2	<ul style="list-style-type: none"> <li>• With setting up contract, break up into separable portions, giving an out for the client to terminate any “unreasonable and unfair” contractors.</li> <li>• This was contractor performing well, would automatically get the next stage of the work.</li> <li>• Need to have a nominated 3rd party “arbitrator “ or adjudicator to quickly give a resolution rather than issue dragging on for ever.</li> <li>• Encourage and enticement for team spirit to ensure through the rough and tumble of building process.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Should internal providers’ be engaged</li> <li>• Head towards relationship contracting</li> <li>• Bring the contractor in during the design phase</li> <li>• Let the contractor make money</li> <li>• Understanding the abilities of the team and the contractor</li> <li>• No open tenders</li> <li>• Set the ground rules up front</li> <li>• Managing expectations</li> <li>• Facilitate quick projects</li> <li>• Good planning understanding what is in front of you</li> <li>• Decisive decision making.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Clients to allow adequate fees for contract administration which allows sufficient management resources for improved communication</li> <li>• Open tendering to be avoided to improve the quality of contractors, and to ensure that contractors make adequate allowance for the cost of doing the work, thereby allowing resources to deal with issues before they become disputes.</li> <li>• Clients should allow adequate fees for design so that the quality of documentation is such that risks of errors and coordination issues are minimized.</li> </ul>
5	<ul style="list-style-type: none"> <li>• Conduct prestart meeting to ensure all parties understand their role and responsibilities</li> <li>• Have behavior rules for meetings</li> <li>• Work together to understand each others views</li> <li>• Offer constructive advice</li> <li>• Offer assistance where possible</li> </ul>
6	<ul style="list-style-type: none"> <li>• Engage the correct contractor you know who can do the job.</li> <li>• Ensure the contractor has the people with the expertise to do the job.</li> <li>• Ensure he has a good track record and is conversant with what you want done.</li> <li>• Is the contractor financial.</li> <li>• Has the contractor got a record of disputation, check as previous clients.</li> <li>• Does the contractor own or have first access to the plant and equipment the project requires.</li> <li>• Is the contractor compliant with his QA and Safety and Environmental or does he just pay lip service to them.</li> <li>• What is the contractors company mission statement.</li> <li>• Is the contractor looking to gain an ongoing relationship with the client.</li> </ul>
7	<p>Avoiding disputes is helped by building a relationship between the contractor and client within which the contractor can have the confidence to make minor changes to keep the momentum going allowing time for larger issues to be sorted before they arise. Issues can be sorted far more efficiently through discussion rather than through correspondence back-and-forth. This leads to far fewer variations and the likelihood of disputes.</p>
8	<ul style="list-style-type: none"> <li>• Designs need to be coordinated across disciplines</li> <li>• Drawing sets consolidated and controlled</li> <li>• Input from constructors to design</li> <li>• Identify risk items at pre-start meetings</li> <li>• Share communications plan</li> <li>• Team approach – get personalities working together</li> </ul>
<b>Organisation 11</b>	
1	<ul style="list-style-type: none"> <li>• Adopting a “no surprises” approach – discuss issues early.</li> <li>• Learning from mistakes – both within the current contract and from previous contracts.</li> <li>• Balanced interpretation of the contract and specification - rather than a self-serving view.</li> <li>• Focus on the issue – not personalities.</li> <li>• Understand the objectives – of both parties.</li> <li>• Be flexible – in problem solving and dispute resolution.</li> </ul>
2	<ul style="list-style-type: none"> <li>• During tender time have meetings with tenderers one on one to clarify any issues or ambiguities so that everyone is clear on the scope of works, contractual arrangements and risk profile.</li> <li>• Set up proactive collaborative systems to improve efficiency such as joint assessment of program, payment claims, and issue resolution/early warning.</li> <li>• Involve industry when putting tender documents together in the first place.</li> <li>• Have a co-located team.</li> <li>• Establish collaborative governance such as a collaborative Project Leadership Team and Management team in order to resolve issues and more effectively deliver the project.</li> <li>• Have “Alliance like” foundation work shops for all contracts to get both Client and Contractor working together better understanding each others interests.</li> </ul>
3	Collaborative approach

4	<ul style="list-style-type: none"> <li>• Develop a collaborative relationship with the contractor with good lines of communication.</li> <li>• Recognise that disputes can occur and discuss procedures to deal with them as quickly as possible at the lowest appropriate levels in both organizations. (Have an escalation procedure with time frames to ensure speedy resolution).</li> <li>• Develop a procedure to have structured, open communication discussions of difficult issues (without prejudice) around areas of possible disagreement. This should be part of the partnering/collaborative approach.</li> <li>• Ensure that a dispute on one area does not spill over into other parts of the relationship – “corral” issues until resolved.</li> </ul>
5	<ul style="list-style-type: none"> <li>• Joint risk exploration exercises/options discussions at the start of contracts to identify options/opportunities</li> <li>• Build personal relationship and understanding of positions, aspirations, goals</li> <li>• Joint client/contractor training opportunities including: <ul style="list-style-type: none"> <li>o Safety</li> <li>o Worksite traffic management</li> <li>o Industrial issues</li> <li>o Spec. interpretation</li> <li>o Technical discussions</li> </ul> </li> </ul>

# Appendix G – PREFERRED DISPUTE RESOLUTION PROCESSES

**Table G.1: Preferred resolution processes by size of project**

Legend – Processes	No.	Tallies				Percent (where n=49)			
		Up to \$20 million	\$20 million to \$50 million	\$50 million to \$200 million	Over \$200 million	Up to \$20 million	\$20 million to \$50 million	\$50 million to \$200 million	Over \$200 million
Negotiation between the parties	1	32	22	22	21	65%	45%	45%	43%
Negotiation using an independent arbiter	2	7	8	7	5	14%	16%	14%	10%
Independent appraisal and determination by an expert	3	9	9	8	6	18%	18%	16%	12%
Conciliation whereby experts review and comment on submissions from both parties and submit them to a conciliator. After due examination, enquiry and consideration, the conciliator makes an informal assessment and suggests a course for resolution which the parties may accept in good faith to reach early settlement	4	3	6	5	5	6%	12%	10%	10%
Mediation whereby an independent mediator works with both parties to explore issues, constraints and alternatives to assist the parties to reach an agreement	5	8	10	12	9	16%	20%	24%	18%
Appointing a Dispute Resolution Board at the time of contract award to work routinely and proactively with both parties during the contract to identify any incipient disputes and to treat them appropriately before they escalate	6	2	2	9	13	4%	4%	18%	27%
Arbitration where both parties submit their claims and counter claims before a judicial hearing. Questions of law may be referred by the arbitrator to the courts for determination	7	2	2	3	3	4%	4%	6%	6%
Litigation	8	1	2	3	4	2%	4%	6%	8%
Hierarchy of resolution for dispute agreed at contract.	9	1	1	1	1	2%	2%	2%	2%
Adjudicator	10	0	1	1	1	0%	2%	2%	2%
Conference with representatives of parties that are able to make a decision	11	1	1	1	1	2%	2%	2%	2%
Negotiation between the parties escalated to respective CEOs for a period of time and then to conciliation per item 4 above or mediation per item 5 above	12	1	0	0	0	2%	0%	0%	0%
Dispute Resolution Board	13	1	0	0	0	2%	0%	0%	0%
negotiation - engineer base mediation	14	0	1	1	1	0%	2%	2%	2%
The preferred procedure is not value based but should be on the complexity of the project.	15	1	1	1	1	2%	2%	2%	2%
Did not respond/blank	0	8	12	10	11	16%	24%	20%	22%
<b>Totals</b>		<b>77</b>	<b>78</b>	<b>84</b>	<b>82</b>				

## Appendix H – SUMMARY OF FOCUS GROUP SURVEY

### Types of Contracts

- A variety of contracting strategies are used – depending on the nature and scope of projects.
- Clients have their preferred delivery systems.
- Relationship contracting is common for larger projects and prequalification is used by all public sector clients interviewed.

### Concerns

- Poor working relationships and communications – adversarial attitudes still exist on both sides. Working relationships is a major area of concern.
- Unrealistic project programs – times are shortened to achieve unrealistic deadlines due to political and commercial pressures.
- Expectations about quality – often quality is not defined especially in commercial D&C building work.
- Contractors submitting unrealistic variations and aggressively claiming by using loopholes in documents.
- The standard of contract documentation – due to delivery pressures and a shortage of experienced personnel. This is still a major problem mentioned by both clients and contractors. Some documents are so comprehensive and complicated that they are difficult to comprehend.
- Mainly in commercial building works, insufficient detail is provided leading to contractors submitting return briefs. Often the briefs are provided by consultants appointed by clients – but many are inexperienced and often, the clients are misled by the consultants. Time constraints lead to corner cutting. Also leads to disparities in awarding contracts because contractors are forced to second guess requirements leading to comparison of apples to oranges.
- Latent or adverse physical conditions – still problems in treating this. Sometimes client can't make site available pre-tender for geotechnical investigation yet expects the contractor to assume responsibility for the risk.
- Partial design at the time of award of contract leads to many difficulties.
- Independence of the Superintendent – raised by contractors.
- Allocation of risk – often not identified and articulated. Sometimes totally transferred (unreasonably) to the Contractor.
- Failure to appreciate the other side's position.
- Contracts reflecting a master/servant relationship rather than a partnership.
- Lack of definition of third party requirements.
- In some relationship contracts, some clients are prepared to share the gain but not the pain.
- Often clients won't listen to contractors' suggestions to improve the buildability or performance of a project because it is not in the contract.
- Assessment of Extensions of Time and associated costs is problematic.
- Tenders awarded on the basis of lowest price tend to drive quality.
- Traditional contracts are being driven out of the market due to clients not investing in proper planning processes.
- Only limited support for Dispute Resolution Boards.
- Arbitration/litigation far too expensive.
- Lack of accurate record keeping.

- Contractors riding roughshod over sub-contractors.
- Non-performance of sub-contractors. Some contractors reported difficulty in controlling sub-contractors.
- Sub-contractors ambushing contractors on adjudication leaving little time for the contractor to prepare a proper response – refer to the Building Construction Insurance Payment Act.
- Escalation formulae not reflecting cost increases of critical project elements.
- Lack of decisiveness in responses.
- Disputes are inherent in industry and so contractors try to minimise risk through different measures such as early contractor involvement etc. In the building industry many contractors have only a small number of clients and they are reluctant to go into a dispute for fear that they will lose downstream business.
- Often, Special Conditions of Contract are not drafted properly and lead to differences of interpretation which in turn lead to causes of dispute.
- Most disputes are between contractors and sub-contractors – downstream. Contractors report that sub-contractors are not as professional and don't read contracts. They try to treat them well as they have significant commercial leverage in a scarce market.
- Over-zealous administration of contracts can cause unease.
- Interaction with other contracts without proper integration can cause problems.

## **New Initiatives**

- Joint risk/opportunity workshops after award of contract.
- Team building and cultural change initiatives between contractors and clients.
- Strategies emerging to develop a culture of dispute avoidance.
- Early notification to industry players about forthcoming projects – enabling tenderers to better plan for future works – especially important in locations of high demand. This approach enables contractors to target their preferences and assists clients in developing short lists.
- Less emphasis on bottom line (price) and more on relationships and non-monetary attributes.
- Increased use of pre-tender meetings and independent probity auditors – although some think probity auditors are an expensive waste of time but reluctantly agree that they are needed.
- Early engagement of contractor and key sub-contractors.
- Face to face performance reporting on completion of contract.
- Continued use of a standard suite of contract documents provides consistency and understanding.
- Some contractors are shying away from hard dollar contracts in favour of management contracts.
- Inclusion of good faith requirements in contracts – for both parties.
- Early contractor engagement has benefits in planning and early works prosecution. It enables the contractor to work with the client as a team – managing scope, design, budget, program and quality. On the completion of design a Guaranteed Maximum Price is developed which is pretty well risk free – all risk has been taken into account through the involvement of all parties.
- Some clients specifying provisional amounts or schedule of rates for foundation works.
- Gateway reviews in tender processes to ensure that contractor is best for project.
- Security of Payment Act has been a success, with an overall a drop in disputes.
- Disputes vastly reduced / eliminated by alliances (collaboration) but some government clients don't have resources to form an alliance and are therefore driven down the D&C route.

- One contractor reported that certain levels of dispute resolution are referred to senior executive level for decision – relieving the project team of harming relationships at project level and enabling client/contractor relationship to be more thoroughly maintained and resolved.

### **Deficiencies**

- Only one organisation interviewed appeared to have a structured induction and training program for staff engaged in contract management.
- Lack of formal feedback of lessons learned into future contracts and strategies.
- Lack of experienced project managers in an expanding market.



## AUTHOR BIOGRAPHIES

### **Nick Blismas**

*Discipline Head Construction Management, School of Property, Construction & Project Management, RMIT University*

Nick is Discipline Head for Construction Management in the School of Property, Construction & Project Management, having joined RMIT University from Loughborough University (UK) in 2004. His main research fields are: construction OHS; multi-project and programme management; and off-site production. His research has always been industry focussed, involving significant numbers of collaborating organisations. In addition to his 12 years construction management research experience, both in Australia and the United Kingdom, Nick also has 3 years industry experience as a project manager.

### **David Jellie**

David Jellie is a professional engineer with over 30 years experience in planning, design and construction of roads, bridges and highway infrastructure. His early career involved bridge/road design and construction with VicRoads, before he moved into the field of project management. He was the project manager of two of Victoria's largest road infrastructure projects – the West Gate Freeway and the Western Ring Road. In 1988, Mr Jellie was seconded from VicRoads to assist in establishing the Victorian Government-owned consulting organisation - the Overseas Projects Corporation of Victoria (OPCV). As General Manager of OPCV, he was involved in a broad cross-section of projects funded by the World Bank, the Asian Development Bank, AusAID and international government sector and private sector clients.

### **Ron Wakefield**

*Professor and Head of School, School of Property, Construction & Project Management, RMIT University*

Ron is currently Professor of Construction, and Head of the School of Property, Construction and Project Management at RMIT, Australia. His research and teaching is focussed on construction with particular emphasis on production systems, management of construction operations, use of information technology and whole of life performance of built assets. Prior to joining RMIT in 2005, Ron was the William E. Jamerson Professor of Building Construction in the Department of Building Construction, Virginia Tech, USA. He was Principal Investigator for the Industrializing the Construction Site project (Phases I, II, III, IV, V, Stage V extension) a multi million dollar research effort that led to the Industrializing the Residential Construction Site series of monographs prepared for the Office of Policy Development and Research, US Department of Housing and Urban Development. Dr. Wakefield has over 20 years experience as an international researcher, consultant, and engineer in construction. Prior to joining Virginia Tech, Dr. Wakefield taught at The University of New South Wales, Sydney, Australia. He was a visiting Fellow at City University of Hong Kong in 1995.

## **James Harley**

James Harley has over twenty-five year's project management experience in the cultural, government and manufacturing sectors. He has developed policy and coordinated the take-up of digital media and online technologies since 1990. James has a Masters in Museum Studies and most recently, has been working with RMIT University as a Research Associate, where he has completed his Masters and Doctoral (pending) studies in the area of online collaboration in project management. He is the recipient of the Victorian Department of Premier and Cabinet Postgraduate Scholarship (2003-05) and an Australian Postgraduate Award (2006-08).



**Cooperative Research Centre  
for Construction Innovation**

9th Floor, L Block  
QUT Gardens Point  
2 George Street  
BRISBANE QLD 4001  
AUSTRALIA

Tel: +61 7 3138 9291

Fax: +61 7 3138 9151

Email:  
[enquiries@construction-innovation.info](mailto:enquiries@construction-innovation.info)

Web:  
[www.construction-innovation.info](http://www.construction-innovation.info)



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