

THE SOCL'S DELAY AND DISRUPTION PROTOCOL AND THE AUSTRALIAN CONSTRUCTION INDUSTRY

Peter Ward¹

¹*School of Architecture and Built Environment, University of Newcastle, Callaghan, NSW 2308, Australia*

Delay and disruption on construction projects leads to the delayed completion of projects, increases in project costs, poor commercial and legal relationships, client dissatisfaction, and damage to the image and reputation of the construction industry. In October 2002, the United Kingdom's (UK's) Society of Construction Law (SOCL) published a delay and disruption protocol (the protocol) aimed at addressing the issues associated with delay and disruption on UK construction projects in the context of the UK's legal system and standard forms of construction contracts. This research examines the suitability for adoption of the SOCL's protocol by the Australian construction industry as a means of minimising the effects of delay and disruption on Australian construction projects. Semi-structured qualitative interviews with representatives of the SOCL involved in the drafting of the protocol, representatives of the Australian legal profession, and representatives of the Australian construction industry were carried out to determine their opinions of the suitability of the Protocol for use by the Australian construction industry. Results indicate an appreciation of the aims of the protocol and an acknowledgement of the benefits of most of its provisions, however uncertainty exists concerning a likely driving force behind the adoption and use of the protocol by the Australian construction industry. Conclusions are, that most, but not all of the provisions of the protocol are suitable for adoption and use by the Australian construction industry.

Keywords: claims, delay, disruption, extension of time, protocol.

INTRODUCTION

In the United Kingdom (UK) it is estimated that delay and disruption on construction projects costs the industry in excess of eight billion pounds per annum (Pickavance, 2003). The complex nature of the construction process (Pickavance, 2000), the poor record keeping by construction organisations (Vidogah and Ndekugri, 1997), the time involved in the retrospective identification, collection, validation, and collation of suitable evidence, often from incomplete project records and disbanded project teams, and no agreed or universally recognised and accepted method of analysing and quantifying delay and disruption claims based on the assembled evidence are often cited as the cause of the excessive costs and subsequent dissatisfaction resulting from delay and disruption disputes on construction projects.

In October 2002, the UK's Society of Construction Law (SOCL) published a Delay and Disruption Protocol (the protocol) aimed at addressing the issues associated with delay and disruption on UK construction projects in the context of the UK's legal system and standard forms of construction contracts. The SOCL are an organisation founded in 1983 with over 1700 members from all sectors of the construction industry

¹ P.Ward@newcastle.edu.au

who promote for public benefit, the education, study and research in the field of construction law and related subject's in the UK and overseas, who undertook the production of the protocol of their own accord following their experiences and involvement with delay and disruption events on construction projects. The protocol is not put forward as a benchmark of current good practice, but as a general statement and guide whose recommendations are to be applied with common sense.

McCredie (2002), investigating how the protocol was likely to be received by the UK construction industry identified the main issues associated with delay and disruption as being the:

- “Preparation, approval and updating of the contract programme;
- Entitlement to an extension of time;
- Ownership of float built into the programme;
- Concurrent delays attributable to separate employer and contractor risk events;
- Delay analysis techniques;
- Compensation payments”.

The protocols objective is to “*provide useful guidance on ... the common issues that arise in construction contracts*” (Society of Construction Law, 2002), whilst its purpose “*is to provide a means by which the parties can resolve these matters and avoid unnecessary disputes*” (Society of Construction Law, 2002). The protocol is not intended to be a contract document, and its contents are not meant to take precedence over the express terms of a contract, nor is it intended to be a statement of law. It is a proposed “*scheme for dealing with delay and disruption issues*” (Society of Construction Law, 2002) in a balanced and viable way that is available for:

- “Adoption by the parties to a construction contract, in order to provide the means to avoid extension of time disputes;
- An aid to deciding issues that are not clearly covered by an existing contract;
- An aid to decision makers ... in dealing with delay issues” (McCredie, 2002).

Implementation of the protocol is intended to be by agreement between the parties by whatever administrative procedures they consider suitable and acceptable. Where the parties have agreed to use the protocol as an aid to the management of the contract, the protocol is to prevail over any conflicting case law, but where the protocol is in conflict with any of the terms of the contract, the contractual terms are to take precedence.

The protocol is made up of four sections:

1. Introduction;
2. Core principles relating to delay and compensation;
3. Guidance Notes;
4. Appendices.

The introduction states the objective and aim of the protocol; outlining the contractual status the drafters intended it to have. The core principles section contains twenty-one statements that provide the framework of suggested good practice for dealing with delay and disruption events. The guidance notes section consists of four sub-sections.

Guidance section one contains the guidelines that explain and clarify the protocol's position on the core principles. Guidance section two gives guidance as to the preparation and maintenance of the programmes and records recommended to be kept as a means of minimising or avoiding disputes. Guidance section three recommends a procedure for accurately and efficiently dealing with extension of time applications that occur during the course of the project using the programmes and records recommended to be kept in guidance section two. Guidance section four identifies and recommends a number of methods suitable for the retrospective analysis of delay and disruption events, as well as suggesting suitable sources of evidence. The protocol contains four appendices. Appendix A contains a glossary and definitions of words and expressions commonly used in construction delay and disruption situations. Appendix B consists of a model specification clause for a large complex project (whose principles could be applied to smaller projects) to be included in the specification section of the project's tender documents, describing the requirements for the preparation, submittal, updating, and revision of the contractors programme. Appendix C consists of two model records clauses (one suitable for small projects and one suitable for medium to high value projects) to be included in the specification section of the projects tender documents or contract conditions. Appendix D contains nine figures illustrating the principles and practice set out in the protocol.

Adoption and use of the entire protocol by the UK construction industry has been limited. The aims, objectives, and philosophies of the protocol have been received favourably, with many of its individual provisions being successfully adopted, used and implemented, resulting in "protocol compliant" clauses and agreements being developed, a process acknowledged and supported by the SOCL.

The aim of this research was to obtain the opinions of the protocol drafters, Australian legal practitioners, and Australian construction industry practitioners concerning the suitability of the protocol's provisions for dealing with delay and disruption events on Australian construction projects as a means of assessing its suitability for adoption and use by the Australian construction industry.

METHODOLOGY

The research was conducted in accordance with the Commonwealth of Australia's National Statement on Ethical Conduct in Research Involving Humans, following procedures approved by the University of Newcastle's Research Ethics Committee.

Semi-structured qualitative interviews with four of the protocols drafters, three Australian legal practitioners specialising in construction delay and disruption disputes, and three Australian construction industry practitioners experienced in the administration, negotiation, and resolution of delay and disruption claims were carried out to obtain their opinions of the suitability of the protocols provisions for dealing with delay and disruption on Australian construction projects, and their suitability for adoption and use by the Australian construction industry.

The participants were asked to state their opinions on a total of twelve questions. All but the first questions were identical for each participating group. Details of those who were interviewed are contained in Table 1.

RESULTS

The responses obtained from the members of the SOCL are considered to be representative of the views and opinions of the UK construction industry due to the

extensive two years industry wide consultation process that was undertaken during the production and drafting of the protocol. Due to the small number of Australian participants interviewed, their responses are considered to be indicative of those who are likely to be involved in the negotiation and resolution of delay and disruption disputes on Australian construction projects.

Table 1: Background details of the participants

Participant	Background
SOCL1	An independent claims consultant with over twenty years experience of working in the construction and civil engineering industry.
SOCL2	A solicitor and Partner with a leading UK law firm with over twenty years experience of resolving national and international construction and engineering disputes.
SOCL3	Managing Director of a specialist risk, programming and dispute resolution organisation with over fourteen years experience of civil engineering and building disputes.
SOCL4	Head of a large UK organisations forensic engineering and construction disputes team with over twenty years experience as a chartered quantity surveyor and over fourteen years experience as an arbitrator and adjudicator.
PART1	A lawyer and arbitrator who is a Partner in a leading Australian law firm whose areas of expertise are Construction, Dispute Resolution, and Litigation.
PART2	A lawyer and Partner in a leading Australian law firm with over seventeen years legal experience who specialises in construction law.
PART3	A director and co-founder of a specialist Australian construction and asset cost consulting Quantity Surveying Practice with expertise in commercial construction, procurement, and dispute resolution.
PART4	An assistant contracts manager in the Legal and Contractual Department of one of the Australian States Department of Public Works.
PART5	A lawyer and arbitrator who is a Partner with a leading Australian law firm, a Fellow of the Institute of Arbitrators Australia, and a Member of the Australian Institute of Judicial Administration, whose areas of practice include construction law and ADR.
PART6	A director of an Australian Quantity Surveying Practice representing clients and contractors, with over fifteen years construction industry experience.

Clarifying statements contained in the questionnaire, the questions, and the participant's edited and quoted responses are included below.

Question 1: The protocol drafters were asked for their opinions of the protocol.

The protocol drafters considered the published document to be of “*good value to the industry*” (SOCL2) as a “*best practice document with wide applications that aren't particularly lawyer driven or lawyer biased*” (SOCL1) that provides a “*useful mechanism for the construction industry on how projects should be planned*” (SOCL4). It was acknowledged that it was probably “*more practical on larger projects that had more formal project control procedures, but it had raised awareness of the key issues*” (SOCL3) and “*set some foundations which others could build on*” (SOCL2).

Question 1: The Australian legal profession and construction industry representatives were asked what knowledge they had of the protocol prior to being interviewed.

The respondents stated that they had either a limited knowledge (PART1, PART2, and PART4) or no knowledge whatsoever (PART3, PART5, and PART 6) concerning the content or existence of the protocol.

Question 2: The participants were asked to state what they perceived to be the most important issue the protocol sought to address.

There were a number of responses to this question. The recognition of the importance and use of a regularly updated programme (SOCL1, PART4, and PART6),

concurrency (SOCL2), the establishment of agreed parameters on dealing with extensions of time from a liability and quantum basis at the time of a delay event (SOCL3, PART1, and PART3), and the waste of money spent on disputes rather than planning the work (SOCL4), were all identified as being the most important issues the protocol sought to address.

The guidance section of the protocol recommends that the parties address the issue of ownership of float in the wording of the contract. Where they have failed to do so, the protocol recommends that the float is not for the exclusive benefit of either the employer or the contractor, but is available for use by those who need it first, and that an extension of time should only be *"... granted to the extent that the Employer Delay is predicted to reduce to below zero the total float on the activity paths affected by the Employer Delay"* (Society of Construction Law, 2002).

Question 3: The participants were asked to state their opinions of how the protocol dealt with the issue of ownership of float.

This was recognised as one of the *"most controversial parts of the protocol"* (SOCL2), and that if the issue of float had been addressed alone it would *"not have been addressed in the way that it was"* (SOCL2). The protocol drafters clearly indicated that the issue was debated intensely between themselves, and that they eventually *"agreed a compromise to the ownership of float argument"* (SOCL1 and SOCL3) *"in order to create a balance and to achieve a consensus in the drafting of the document"* (SOCL2) that was more inline with case law (SOCL4) that *"recognises that there will be money due for delays in some cases where you don't actually need a time extension"* (SOCL3).

The representatives of the Australian legal profession and Australian construction industry indicated mixed and at times conflicting opinions over this issue. Some considered it to be a sensible, fair, and *"a reasonably balanced approach"* (PART1, PART6, and PART4) that gave *"clear guidance to float ownership"* (PART6), whilst others stated that traditionally *"in Australia float ... is generally considered to be owned by the builder"* (PART1 and PART3) because *"it's the builder who dictates the programme"* (PART3), and that they were *"not entirely convinced of the concept that it's available for use by those who need it first"* (PART4), and that they *"struggled to understand how it's going to be applied in practice"* (PART2), and that *"the float should, in the absence of some express agreement, belong to the contractor"* (PART5).

Question 4: The participants were asked to suggest alternative means of dealing with the issue of ownership of float.

A number of alternative means of dealing with this issue was suggested. Some stated *"the float should belong to the contractor"* (SOCL4 and PART5), or that it should be *"dealt with by clear risk allocation in the contract"* (PART4) and that it should be stated *"very clearly who owns it up front"* (PART3), or that it's *"just a matter for negotiation at the time of negotiating the contract"* (SOCL2) and that it is *"really up to individuals drafting the contract as to how they want to approach it"* (PART6). The parties should *"prescribe very clearly what the rules of a particular contract are"* (SOCL1) and *"analyse the appropriate level of risk, and prescribe in the contract how the time risk is to be dealt with"* (PART1).

Concurrency concerns the effects of an employer delay and a contractor delay occurring at the same time or sequentially causing concurrent delay. With regard to

extensions of time, the protocol recommends that: *“Where contractor delay to completion occurs concurrently with employer delay to completion, the contractor’s concurrent delay should not reduce any extension of time due”* (Society of Construction Law, 2002).

Question 5: The participants were asked to state their opinions of how the protocol deals with the issue of concurrency.

Overall there was general agreement and support for the way the protocol addressed the issue of concurrency. It was considered *“commonsense and consistent with case law”* (SOCL3) that seemed *“to be the practice, at least in Australia on most contracts”* (PART2) that was *“fairly well accepted”* (PART2) and that it was *“fair to all concerned”* (PART6).

Question 6: The participants were asked to suggest alternative means of dealing with the issue of concurrency.

There were limited suggestions of alternative means of dealing with the issue of concurrency. Apportionment of time and money was suggested (PART1, PART2, and PART4), but this was recognised as being *“very subjective”* (PART2). Use of the dominant cause method was identified as a possibility (SOCL2 and PART5), however, it was stated that the protocol intentionally avoided this method because it was *“so hard to define what dominance is”* (SOCL2). Another suggestion was to simply state there was no entitlement to an extension, although it was considered that this was the type of approach the protocol was trying to remedy (PART6).

With regard to compensation for prolongation due to concurrent delay, the protocol recommends that: *“If the contractor incurs additional costs that are caused both by employer delay and contractor delay, then the contractor should only recover compensation if it is able to separate the additional costs caused by the employer delay from those caused by the contractor delay”* (Society of Construction Law, 2002).

Question 7: The participants were asked to state their opinions of how the protocol dealt with the issue of compensation for prolongation due to concurrent delay.

The protocol drafters considered the protocols approach to be fair and balanced where the contract doesn’t make the position clear (SOCL1, SOCL2, and SOCL3) *“in that you have to demonstrate cause and effect, and you have to link the cost to the specific cause for which the employer is liable”* (SOCL4).

Most of the representatives of the Australian legal profession and Australian construction industry agreed that it was a fair and equitable approach (PART3, PART4, PART 5, and PART 6), however concern was expressed about the practical application of the recommendation, commenting that it would be *“impossible to enforce”* (PART1) and that it would be *“difficult to separate costs incurred by the contractor and by the principal”* (PART1) and that it was *“very difficult to split the costs up on the actual job”* (PART1), possibly resulting *“in no costs being awarded”* (PART2), making it *“difficult to successfully put the protocol’s recommendations into practice”* (PART4).

Question 8: The participants were asked to suggest alternative means of dealing with the issue of compensation for prolongation due to concurrent delay.

Two of the participants interviewed suggested that it was *“a matter of risk allocation and what the parties are prepared to accept”* (PART2) and that an alternative means

of dealing with this issue could be by *“direct reference to specific contract clauses that make it very clear how this should be dealt with”* (SOCL1). Others suggested a suitable alternative would be to *“deal with additional compensation as a supplemental agreement, so that the contractor and the employer agree what the effects of change or changed conditions are”* (SOCL4), or to *“agree a rate, similar to liquidated damages, then you could agree a final account on the day that the job is finished”* (SOCL3), provided *“it was agreed up front then ... the compensation is already factored”* (PART6). Other participants suggested a suitable alternative was to use *“the dominant cause approach ... but ... it is less certain ... [and will] create arguments as to what is the dominant cause”* (SOCL2). Another participant stated *“... the only sensible alternative is that if there is a delay which is caused by an act or omission of the principal, then all of the costs relating to that act or omission, be they the principals costs or the contractors costs, should be able to be claimed, and if it's caused by an act or omission of the contractor, then costs should be nil”* (PART1), and that *“whoever is in culpable delay should bear the costs of that delay”* (PART4). The remaining participants indicated that the method suggested by the protocol was *“as good as any”* (PART5), or that they couldn't suggest any suitable alternative (PART3).

The protocols “model” clauses contain extensive provisions concerning the issuing, updating, and analysing of construction programmes, as well as the keeping of extensive project administration records.

Question 9: The participants were asked to state their opinions of the likely consequences for an organisation of using the protocols “model” clauses in relation to:

- i. Project administration;
- ii. Project hardware/software requirements;
- iii. Personnel; and
- iv. Training.

The requirements of the protocols “model” clauses were considered to be *“administratively onerous on both parties”* (PART4) and that by *“complying with the recommendations of the protocol as to the maintaining, issuing, updating and analysing of programmes was going to put some additional loading on the administration side and therefore increase costs”* (SOCL2), and that there was *“no doubt that following the protocol will increase the administration costs of the project”* (SOCL4). The consequences of this was considered to be dependant upon the size of the project in question (PART3), and that the resultant *“... administration costs will be more than offset by a reduction in the cost of a dispute resolution, but more importantly an improvement in the site efficiency ...”* (SOCL4) and project administration (PART5), resulting in *“a greater deal of clarity in their administration and their actual cost recovery, and the efficiency with which they build the job”* (PART1) that would *“make the industry more honest, professional and transparent”* (SOCL3) by providing *“forward visibility to your project in terms of how long it's going to take, what it's going to cost, what resources are necessary”* (SOCL4). Overall it was considered that *“any attempt by the parties to reach agreement at the outset to the form and format of programmes and how they will be used in assessing extensions of time can only reduce disputes”* (PART2).

The participants considered the consequences of the protocols “model” clauses on project hardware and software requirements to be minimal, stating *“it shouldn't be*

any different again to what is going on in this day and age, when on most jobs there is software that is so easily used on projects” (SOCL3) whilst *“all but the smallest jobs have site computers”* (SOCL4), and that *“most contractors have the relevant hardware and software”* (PART2), with the only concern being *“the software and the compatibility between systems”* (PART6).

There was limited comment from the participants on the likely consequences of implementing the Protocols “model” clauses on the issue of personnel other than they couldn’t see it *“double the size of your contract administration team but it might increase the responsibilities of your current document control person”* (SOCL3).

There was mixed responses from the participants in terms of the consequences of implementing the “model” clauses on an organisations training requirements. Some felt *“there may be a relative lack of suitably qualified and experienced personnel”* (SOCL2) in this area, with *“limited personnel currently available in the industry that have sufficient skills to implement the protocol’s recommendations, particularly if required to operate related software”* (PART4), and that *“there’s not many guys around who are that interested in doing programming full time”* (PART3). Practically all of the respondents agreed that there would be a need for some form of training. There was disagreement as to the levels of training required, with some stating *“we would need a very considerable amount of training of appropriately qualified personnel”* (SOCL2), and that they *“would have to have an increase in training”* (PART1) in *“both administrative skills and software”* (PART4), whilst others stated that *“training would not be that difficult”* (PART3), and that *“training for application of the protocol ... are hands on skills so you shouldn’t require any additional training”* (SOCL3), whilst some considered training to be *“required on the employers side of the fence”* (SOCL4).

The guidance section of the protocol recommends that the ascertainment of the duration of an extension of time be carried out using the “time impact analysis” method.

Question 10: The participants were asked to state their opinions of the “time impact analysis” method of ascertaining the duration of an extension of time recommended by the protocol.

The protocol drafters exhibited mixed responses to this question. Although it was considered to be *“the fairest method”* (SOCL1) and that *“for most disputes ... is the most appropriate method of analysis”* (SOCL4), it was acknowledged as having limitations in that *“if you do not have the right data then it is not worth doing because without the right data it will be garbage in and garbage out, or nothing in and nothing of worth out”* (SOCL2), and that the Protocol states that *“depending on the information you have, that would then dictate the method you could use”* (SOCL2). One of the protocol drafters was critical of the method stating *“I think it is over-rated ... the reason it is useful at the time is because it is the best information you have and allows agreements to be struck on that information. It is not as precise and accurate as people believe it to be because it projects pure entitlement, but not necessarily the actual delay ... I think the method has been used and given too much prominence over the others in terms of forensic analysis”* (SOCL3).

The representatives of the Australian legal profession and Australian construction industry generally appeared to be in favour of the method. Comments such as *“it is far superior to any other method I have seen ... When done properly by both sides it seems to come up with a fairly consistent answer, not identical but close”* (PART2), *“I*

think it's probably the most reliable" (PART3), *"I think it's probably the more typical approach, certainly during the administration of the contract, so I'm not opposed to idea"* (PART4), and *"I think that's a sound approach"* (PART5) indicated their approval. Only one participant indicated that they didn't feel they knew enough about the method to make comment (PART1).

Question 11: The participants were asked to state their opinions of whom or what they thought would be the driving force behind the success of the adoption of the protocol by the construction industry.

There was a mixed response to this question from the participants. The government acting as a client and clients in general insisting upon the protocols use was considered to be a likely driving force for the adoption of the protocol by the construction industry (SOCL1, SOCL3, PART3, PART4, and PART 6). Others thought the industry itself (SOCL2), by incorporating it into some of their standard forms of contracts (PART2), would be the likely driving force. Suggestions included the involvement of industry think tanks and professional bodies (PART 1 and PART5), increased education, and the involvement of best practice initiatives (SOCL1 and PART2) could be likely drivers. Only one participant stated the *"the certainty of outcome you get from having a contemporaneous updated project, so you know when things are going wrong and you can deal with them at an early date"* (SOCL4) as the likely driving force to the adoption of the protocol by the construction industry.

Question 12: As a concluding question, the participants were asked to comment on any other issues concerning the protocol. Edited highlights of their responses are contained in table 2.

Table 2: Participants edited responses to question 12

Participant	Response
SOCL1	<i>"... I'm ... pleasantly surprised that there does still seem to be continued interest ... it's not something that's died a death, just the reverse".</i>
SOCL2	<i>"One of the most interesting developments I am aware of is that in the US there are now two bodies looking at the protocol, and working towards the creation of a US version ..."</i>
SOCL3	<i>"... I think it's been extremely successful ... It is now accepted you need a critical path and you need to update the programme frequently for it to be relevant".</i>
SOCL4	<i>"... In our very first draft ... we were advocating the inclusion of earned value analysis to monitor the project and its progress. We decided to leave that, we decided it was a step too far for the industry as it is".</i>
PART1	<i>"... the protocol focuses on the contractor's obligation to provide information to keep the principal updated ... I'd like to see a balancing up of the obligation on the principal to tell the contractor about things which are happening that may give rise to delays on the project ...".</i>
PART2	<i>"... I support totally the concept that estimation of times and valuations should be carried out at the time the event occurs or very close to it, and not deferred until the end of the contract. That's probably one of the single biggest problems in respect of disruption and delay ... The only other comment I would make is that in a couple of areas the protocol says that the favoured position is that agreement be reached at the outset ... I think more work needs to go into the fallback position of what if agreement is not reached ...".</i>
PART3	<i>"... I think it's trying to move forward in an area which has great potential ... It's a matter of how this will be accepted within existing construction contracts ...".</i>
PART4	<i>"Generally I'm very much in support of it, particularly for large projects".</i>
PART5	<i>"No I think that the comments I have raised have probably covered all I wish to say".</i>
PART6	<i>"Looking at it and looking at what our involvement is as a client's representative in a project ... it could be people like ourselves who would have more to do with the adoption of the protocol".</i>

CONCLUSIONS

Knowledge of the existence, content, or aims of the protocol is limited in Australia, however those interviewed considered it to be a useful value for money good practice document that seeks to address some of the delay and disruption issues that are prevalent on Australian construction projects.

Although it deals with the issue of ownership of float in a way that is considered to be a fair and reasonable approach, it is at odds with how the issue is treated by the majority of the Australian standard forms of construction contracts and Australian industry practice.

The protocol addresses the issue of concurrency in a way that is considered to be a fair and commonsense approach that is consistent with both UK and Australian case law that would enable the provisions to be adopted without major conflict with current Australian industry practice, or the need for extensive re-drafting of the majority of Australian standard forms of construction contracts.

The protocol addresses the issue of compensation for prolongation in a way that is considered to be fair and equitable, but difficult or impossible to enforce in practice. Adoption of these provisions could lead to further prolongation claims and disputes on Australian construction projects.

The adoption and use of the protocols “model” clauses is likely to result in an increase in project administration costs, no increase in site personnel, increased responsibilities of those involved in the project administration, little if any effect on project computer hardware and software requirements, and a likely increase in the need for training in programming techniques and the use of computers for those administering the project. The perceived benefits are a more transparent and professional administration process that would increase cost recovery and minimise disputes.

The time impact analysis method of determining an extension of time was considered to be a suitable method already commonly used in Australia, enabling the provisions to be adopted with the minimal of conflict.

There appeared to be no agreement as to who would be the most suitable or likely driving force behind the adoption of the protocol by the Australian construction industry.

REFERENCES

- Commonwealth of Australia (1999). *National Statement on Ethical Conduct in Research Involving Humans*, November 2003 reprint. Commonwealth of Australia.
- McCredie, J. (2002). *Resolving Construction Disputes*, The Forensic Accountant, Available: <http://www.eotprotocol.com/press.shtml> (Accessed 2004, May 20).
- Pickavance, K. (2000). *Delay and Disruption in Construction Contracts*, 2nd Ed. LLP.
- Pickavance, K. (2003). *Renaissance*. Construction Law Journal, Volume 3. Available: <http://www.eotprotocol.com/press.shtml> (Accessed 2004, May 20).
- Society of Construction Law, (2002) *The Society of Construction Law Delay and Disruption Protocol*, March 2003 reprint, The Society of Construction Law.
- Vidogah, W., and Ndekugri, I. (1997). *Improving Management of Claims: Contractors' Perspective*. Journal of Management in Engineering, September/October, pp 37 – 44.