

# **APPLICATION OF INNOVATIVE PROTOCOLS AND TECHNOLOGIES AS A MEANS OF COMPLYING WITH THE BUILDING AND CONSTRUCTION INDUSTRY SECURITY OF PAYMENTS ACT 1999**

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## **ABSTRACT**

The Australian Building and Construction Industry Security of Payments Act 1999 (updated 27 November 2003) provides a statutory framework governing compulsory progress payments for those who undertake construction works or provide goods or services as part of a construction contract. The onerous administrative processes of the Act are claimed to disadvantage the respondents. This paper reports research investigating the use of two recent innovations that could assist all parties in the administration of the Act. The first is the Society of Construction Law's Delay and Disruption Protocol's "model clauses" for the recording of project information and the monitoring of project progress, and the second is the use of Web based technology as a project administrative tool for the efficient and effective recording and communication of that information.

## **INTRODUCTION**

The Building and Construction Industry Security of Payment Act 1999, updated 27 November 2003 ("the Act") (NSW Government, 1999), provides that anyone undertaking construction work or supplying related goods and services (with the exceptions of those stated in the Act), has a statutory right to receive regular progress payments, regardless of whether the relevant construction contract employed makes such provisions, and outlines the procedures to be followed, as well as the timescale in which such procedures have to be undertaken, to enable the parties to comply.

Respondents to the process are being disadvantaged as a result of complying with the Act (Davenport, 2005) as well as by the result of recent court decisions (*Coordinated Construction v Hargreaves* [2005] NSWSC 77), which enable the inclusion of claims other than progress payments to be determined by the adjudicator under the Act. Claimants are purported to be taking months to prepare detailed and comprehensive payment claims, often with the assistance of legal representation, prior to serving them on the respondents who have limited time to compile a detailed payment schedule in response. A number of recent innovations could assist both parties to comply equitably with the requirements of the Act.

## **THE PROTOCOL**

In October 2002, the Society of Construction Law (SOCL) (The Society of Construction Law 2002) published a Delay and Disruption Protocol (“the Protocol”) aimed at addressing the issues associated with delay and disruption on construction projects in the context of the United Kingdom’s legal system and standard forms of construction contracts. Recognising the reputation of the construction industry for poor record keeping and project progress recording, the SOCL produced “model” clauses in the protocol for inclusion in the specification section of project documents. The model clauses recommend the types, form, detail, methods, and periods of updating of site records, to be kept and maintained during the project to ensure that adequate and suitable records exist to assist in the quantification of the consequences should a dispute occur.

## **WEB BASED TECHNOLOGY (WBT)**

WBT for use on a construction projects consist of a central information repository containing the vast array of project documents, design information, and correspondence (current and superseded) that could be readily accessed instantaneously by project participants at any time, from wherever they have access to a computer and internet facilities (Nielson and Sayar, 2001). Participants would have access to, and be able to upload and download, the most current and up to date project documentation instantaneously to/from a centralised single repository, thereby minimising the risk of using outdated and conflicting information, as well as having access to previously “filed” documentation. Levels of security could be established to

ensure only those who are authorised have access to specific documentation and the ability to upload and download. Project documentation would be archived (correspondence, as built, and superseded) within the repository providing records of what documents were available, to whom they were available to, when they were available, and by whom (and when) they had been had accessed, as a means of providing evidence to limit, resolve, or avoid disputes, and assist in complying with the Act.

## **RESEARCH AIMS**

The aim of this research was to examine the application of innovative protocols such as the SOCL's Delay and Disruption Protocol's model clauses for the recording of project information and the monitoring of project progress; and the implementation of innovative WBT as a project administrative tool for the efficient and effective recording and communication of that information as a means of enabling both parties to comply equitably with the requirements of the Act.

## **METHODOLOGY**

The research was conducted in three stages:

- Stage 1: A detailed review of the provisions of the Act, and the Protocol's model clauses, and literature on the Act, the Protocol and WBT was carried out to determine the processes and procedures that need to be followed, and the advantages and disadvantages of their implementation.
- Stage 2: Semi-structured qualitative interviews were also carried out with four of the protocols drafters, three Australian legal practitioners specialising in construction disputes, and three Australian construction industry practitioners experienced in the administration, negotiation, and resolution of construction claims, to obtain their opinions of the effectiveness and suitability of the protocol's model clauses as a means of administering a project's documentation. Background details of those who were interviewed are contained in Table 1.

- Stage 3: a content analysis of the interview transcriptions was conducted to determine the possible effectiveness of combining the use of the Protocol with WBT for equitably administering the requirements of the Act. Although there are a number of trademarked WBT systems currently in use in Australia, none of these systems were specifically referred to for the purpose of this research.

Participant Reference	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 organisation's 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 that specialises in construction law with over seventeen years legal experience.
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.

**Table 1** Background details of interviewees

## THE ACT

The Act ensures that a claim for regular progress payments can be made, effectively banning “pay when paid” clauses (Davenport 2000) and defines a procedural mechanism for:

- (i) The issuing of a payment claim by the person claiming payment;
- (ii) The provision of a payment schedule by the person by whom the payment is payable;
- (iii) The referral of any disputed claim to an adjudicator for determination; and
- (iv) The payment of the progress payment so determined (Part 1, Section 3 (3)).

Analysis of past adjudication determinations has shown that claimants have a high probability of success of being awarded either the full or a partial amount of a payment claim (Brand and Uher 2004). This could be due to a number of factors:

- (i) The complex nature of the construction process, where few events occur in a way or at a time that they were intended to occur (Pickavance 2000);
- (ii) The construction industry being notoriously poor at documenting procedures and transactions, with the documented information being of a cost accounting nature rather than for the assessment/validation of claims (Vidogah and Ndekugri, 1997).

This hinders the respondents' ability to compile a comprehensive payment schedule, together with the limited time available under the Act for the retrospective identification, collection, validation and collation of the information available, often from incomplete project records. The result is that a claimant can "ambush" a respondent. Under the Act, it is permissible for the claimant to take up to twelve months to prepare a detailed payment claim, possibly with the assistance of legal representation. This can then be served upon the respondent, often at a time that is the most inconvenient and disadvantageous to the respondent, ensuring they have limited resources and time to prepare a detailed payment schedule from exhaustive project documentation in response to the payment claim.

## **TIME PROVISIONS**

The Act allows the claimant to serve a payment claim in the time period determined by or in accordance with the terms of the contract (Part 3 Section 13(4)(a)) or within 12 months after the construction work or the supply of the related goods or services was carried out (Part 3 (4)(b)), whichever is the later, whilst limiting the time available for the respondent to prepare a payment schedule in response to the progress payment claim (Part 3 Section 14) to ten business days after the payment claim is

served (Part 3 Section 14), otherwise they are liable for the whole of the amount claimed (Part 3 Section 15). In reality the claimants are likely to act at their earliest opportunity to maximise their possible payment sum, whilst the respondents are likely to try and delay the process as long as possible to give them more time to collect and provide evidence for their response to the application to minimise payment.

## **VALUATION PROVISIONS**

The Act requires that the construction work and the supply of goods and services be valued:

- (i) in accordance with the terms of the contract, or
- (ii) if the contract makes no express provision with respect to the matter, having regard to the contract price, any other rates or prices set out in the contract, any variation agreed to by the parties to the contract by which the contract price, or any other rate or price set out in the contract, is adjusted by a specific amount, and if defective, the estimated cost of rectifying the defect.

Validation of the amount to be paid will need to be by the provision and agreement of appropriate contract documentation, etc. Again, where the contract is silent as to these details, and without pre-agreement as to the type, form, and regularity of updating of the information, there exists the opportunity for both parties to provide conflicting evidence in support of their argument. This works to the advantage of the claimant in respect of the time provisions of the Act.

## **NOTIFICATION PROVISIONS**

The Act outlines the requirements for the serving of notices in detail, and states when the notices are perceived to have been received. S.31(e) of the Act enables the parties to contractually agree what means and form notices can take other than those specified. This would enable the provisions of the Protocol's model clauses to be implemented and used.

## **THE SOCL'S PROTOCOLS "MODEL" CLAUSES**

The SOCL is an organisation founded in 1983 with over 1700 members from all sectors of the construction industry who promote for public benefit, the education, study and research in the field of construction law and related subjects 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 voluntarily applied with agreement and common sense, that has received a mixed response in the UK.

### **MODEL SPECIFICATION CLAUSE (MSC)**

The MSC included in Appendix B of the Protocol “describes the requirements for the preparation, submittal, update, and revision of the contractors programme”, and is meant to be “in addition to or to expand upon the requirements of the clauses of the conditions of contract” (SOCL 2002). The MSC recommends three programs to be produced and contains comprehensive recommendations concerning the content, form, and timing of the submissions of:

- (i) An initial programme (IP) to be submitted within two weeks of the award of the contract;
- (ii) An accepted programme (AP) to be submitted within four weeks of the award of the contract; and
- (iii) An updated programme (UP), the original AP programme updated every month.

### **ADDITIONAL DOCUMENTATION**

The MSC recommends that the contractor submit the following additional documentation to the CA:

- (i) Method statements (fully cross referenced to the programme) containing a general description of the arrangements and methods of construction and temporary works designs;
- (ii) Cash flow estimates (within four weeks of the award of contract or such other time as specified in the contract), in quarterly periods, of all payments the contractor considers they will be entitled to under the contract.

### **THE MODEL RECORDS CLAUSE (MRC)**

The MRC contained in Appendix A of the Protocol has been drafted to be included in the specification section of a project’s tender documentation (or in the contract conditions if the parties choose) and consists of two clauses:

- (i) Clause 1, a simple records clause, suitable for small projects, identifying the minimum records that should be kept, to be submitted to the CA on a weekly or monthly basis;
- (ii) Clause 2, for medium to high value or medium to highly complex projects, consisting of ten sub-clauses (containing a comprehensive list of what should be recorded), requiring the parties to agree the intervals at which these records are to be delivered. The clause also requires the submission of daily reports, weekly reports, and monthly reports within specified time periods to the CA, in a form agreed between the parties, including a summary of the works performed and referenced on the agreed programme, with a summary of a list of deficiencies and any delays encountered.

## **INTERVIEW RESULTS AND DISCUSSION**

The participants were asked to state their opinions of the likely consequences for an organisation of using the Protocol's model clauses in relation to: (i) project administration, (ii) project hardware/software requirements, (iii) personnel; and (iv) training.

The requirements of the Protocol's model clauses were considered to be "administratively onerous on both parties" (PART4) and that by "complying with the recommendations ... 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 were considered to be dependent 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). 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 benefits of the pre-agreement of the use of the Protocol's model clauses, and the consequential image of transparency and professionalism were considered to be advantageous. However, the recognition that the application of the model clauses was likely to be administratively onerous was considered to be a major disadvantage to the likely success of the implementation of the clauses. The use of a well-designed WBT system could eliminate the perceived administrative problems by providing:

- (i) A standard set of forms for each activity in the facilitation process;
- (ii) Prompt delivery of the documents to the addressed construction participants;
- (iii) The means to know if the other party has read the documents;
- (iv) Record keeping through a centralised database, ensuring all of the participants have the same documents; and
- (v) Avoidance of the mismanagement of documents (Charoenngam *et al.* 2003).

The participants considered the consequences of the Protocol's 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).

The availability of the required hardware and software for the implementation of a WBT system was not considered to be a problem for the majority of construction projects. By using WBT, the issue of compatibility between systems would need to be addressed when the parties initially agree to operate the system. Unless some way of ensuring everyone had available and would use compatible systems for the project, parties would not be allowed to tender for the contracts concerned, thereby eliminating the problem.

There was limited comment from the participants on the likely consequences of implementing the Protocol's model clauses on the issue of personnel other than they could not see it "double the size of your contract administration team but it might increase the responsibilities of your current document control person" (SOCL3).

The increased administrative responsibilities resulting from the implementation of the model clauses for those responsible for the administration of a construction project could be assisted by the use of WBT without the need for an increase in personnel. A well designed WBT system using a central repository for the storage of all of the project's documentation would ensure that it was instantaneously available to those who needed it, in a format most appropriate for that use, minimising the demands on administrative personnel.

There were mixed responses from the participants in terms of the consequences of implementing the model clauses on an organisation's 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).

The introduction of a WBT system to any project would require extensive training during the initial introduction period, together with continued support during the life of the project. Once the system was fully developed and operating, those involved in its use on a continuing basis would become familiar with the processes and procedures involved, thereby requiring a reduction in training and levels of support. Once fully implemented within a major contractor/client, the insistence on its use on all projects would eventually lead to a situation where regular sub-contractor personnel would eventually become fully conversant with the system, and eventually result in limited training requirements (except for updates and modifications to the system).

## **CONCLUSIONS**

The limited time available under the Act for a respondent to prepare a payment schedule in response to a payment claim is disadvantageous and inequitable to the respondent. The pre-agreed use of innovative protocol's and technologies, such as the SOCL's model clauses and WBT, could assist with the efficient and effective collection, storage, and retrieval of relevant project documentation that could result in a reduction in the number of construction project claims and disputes arising, as well as ensuring a more equitable application of the Act.

The perceived benefit of a more transparent and professional image was considered to be favourable, however the manual application of the model clauses was thought to be administratively onerous. This was considered to be a disadvantage and hindrance to the likely adoption and application of the model clauses. The use of a well-designed WBT system could assist with the adoption and application of the model clauses. Most construction projects have the appropriate hardware and software available to implement WBT.

Organisations adopting and applying the model clauses are unlikely to increase the number of administrative personnel employed on a construction project. A well designed WBT system could be a means of assisting the existing levels of administrative personnel employed on a construction project, ensuring the administrative process is carried out efficiently and effectively. Training in the application of the innovations would need to be provided. This would be a natural progression/requirement with the introduction and implementation of the Protocol's model clauses and WBT that would eventually permeate down the chain of regular sub-contractors and suppliers.

The costs resulting from the implementation and use of the Protocol's model clauses and WBT were considered to be justified because of the likely reduction in project dispute costs, together with the benefit of improved site efficiency. Project size was also considered to be a factor in the justification of the costs associated with the successful adoption and implementation of the model clauses and WBT.

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