

Australian Construction Law Newsletter

Issue #47

April 1996

Reprint -

Doug Jones

Where Are Standard Forms Going?

Construction Publications Pty Ltd

A.C.N. 002 872 488

Print Post Approved PP255003/01422



Where Are Standard Forms Going?

- Doug Jones, Partner,
Clayton Utz, Solicitors, Sydney.

1. INTRODUCTION

This article examines the present and future role of standard forms of contract in the Australian construction industry. Standard form contracts have played a significant role in defining commercial relationships between parties to the construction process, domestically and internationally, for many years. Analysis of the present use of standard forms may assist us to predict their future, and future direction.

To set the scene for the future the article evaluates the effectiveness of the two main "industry standard" contracts, AS2124-1992 and JCC-C & D, as well as the recently produced AS4300-1995 for Design and Construct, and in doing so establishes that all are seriously flawed. The article then looks to the future by enumerating a range of commercial and contractual challenges facing the Australian construction industry, and those responsible for the development of industry standard forms. Suggestions and predictions are then made concerning the future relevance and potential contribution of standard form contracts to the industry.

2. DEVELOPMENT OF THE STANDARD FORM CONTRACT

- THE CONSENSUS DRAFTING PROCESS

It is only in recent times that lawyers have had significant input into the drafting of construction contracts. Traditionally, the drafting of general and special conditions of contract has been the province of the construction industry professional. Architects (in building construction) or engineers (in engineering work) were commissioned by owners to advise on the project design and delivery process.¹ Even today, whilst the private sector has embraced the input of lawyers into the contract generation process, the public sector is yet to fully utilise lawyers for this purpose.

However, it must be realised that for construction industry professionals engaged in the project delivery process the general and special conditions of contract are subordinate, in terms of perceived importance, to such processes as estimating, detailed design, tendering, selection of contractors and administration. In any event, drafting contractual provisions is not the core expertise of these professionals. It is from this perspective that the need for standard forms, which can be adopted without the need for

one-off drafting for each project, can be appreciated.

In the 1950s and 1960s, professional associations of the lead construction professionals became involved in the development of standard form contracts for the building and engineering sectors². Possibly out of a wish for industry consensus, and motivated by the pressures of the day to day working relationship between architects and builders, a joint form of contract for building works was developed and endorsed by both builders and architects, Edition 5 for building. Although it may be assumed that architects and engineers represent the interests of owners in the project delivery process, the position with regard to jointly developed standard forms has been and remains much more subtle than this.

The construction industry professional's aim is to achieve completion of the project within predictable (or at least justifiable) bounds of time and cost whilst maintaining an ongoing working relationship with the providers of construction services. In recent times the private sector construction professionals have been deeply concerned by a liability regime which has seen many of them caught up in the disputes that emerge from the construction process.³ The spectre of personal liability and the increasing cost and difficulty of accessing professional indemnity insurance is a concern sometimes reflected in the attitude of construction professionals to the contents of construction contracts.

The public sector construction agencies, like construction professionals, aim to achieve project completion within defined time and cost parameters. However, there is the additional desire to avoid the impact of the political process on the administration of construction, for example by ministerial inquiry following complaint (justified or unjustified) by industry associations or the constituents of members of parliament.

The interests of the lead construction professionals and public sector construction agencies, outlined above, can be contrasted with the interests of contractors and their professional associations.

Lead professionals, and public sector construction agencies are key advisers in the drafting process. This tends to give them a degree of influence inconsistent with the fact that they are ultimately spending someone else's money, not their own. By comparison, contractors and their organisations are inevitably focused on the risks of

the construction process. It is their money which they make, and often lose. The contractor's salvation in a difficult project sometimes depends upon the express, or arguable, risk allocation to be found in the general conditions of the construction contract.

It is suggested, therefore, that the force which contractors and their associations bring to bear on any joint process for the development of general conditions of contract is far more driven and focused than that of the professionals. Edition 5b, jointly sponsored by the Royal Australian Institute of Architects ("RAIA") and the Master Builders Associations ("MBA") is an example of this lead professional/contractor dynamic, predictably setting out a regime highly favourable to builders⁴.

Building owners had no input into the development of E5b. They did however have an input into the development of its successor, the JCC contracts, through the Joint Contracts Committee consisting of the MBA, RAIA and the Building Owners and Managers Association ("BOMA"), a representative of the interests of owners. JCC contracts are true "consensus" documents with agreement being necessary for initial publication and for any subsequent amendments.

When industry participants come together for the purpose of drafting standard forms, each sectional interest will have its preferred risk/obligation allocation. Participants with opposing interests must reach consensus as to the final risk/obligation allocation under the contract. In these circumstances, consensus necessarily means compromise. Any contractual risk allocation which is the product of compromise will, more often than not, render the resultant contract unfavourable and therefore unacceptable to many industry participants.

Another consensus contract, AS2124-1992, (which has its origins in the civil engineering form of contract CA24) has been produced by Standards Australia and is said to be suitable for both building and engineering works. It is the product of a much wider consensus than that required for JCC⁵. BOMA was a member of the Standards Australia Committee OB/3 which prepared AS2124-92 but, disappointed by the consensus drafting process, subsequently refused to endorse its product.

The unsatisfactory character of industry consensus standard forms is not unique to Australia. The English Joint Contracts Tribunal ("JCT") controls the text of the JCT standard form building contracts which are widely used throughout the United Kingdom. The JCT is a private forum, run by a "joint secretariat" of the Royal Institute of British Architects ("RIBA") and the Building Employers Confederation ("BEC").⁶

Proposed amendments to the JCT contracts are subject to a process of *in camera* negotiations between representatives of competing sectional interests. Each amendment must be unanimously agreed to, and each constituent body has a veto. As a consequence, the direction the drafting takes is influenced by how well-mobilised each sectional interest is. Builders, architects and other professionals may possess a strength on the JCT which is inconsistent with their real strength in the industry.⁷

The JCT contracts have been criticised by both the

bench and the legal profession, and have fostered significant amounts of litigation and arbitration.⁸ Some of the criticism has been eminent and trenchant. The position is best summarised by Hudson⁹:

"[The JCT contracts] were frequently amended since their present form emerged in 1963, and they continue to dominate current litigation in the United Kingdom at the time of writing, notwithstanding the emergence of an entirely new RIBA/JCT set of forms in 1980, the chief characteristic of which is an extraordinarily difficult if not obscurantist style of draftsmanship with an exceptional degree of (usually unexplained) cross-referencing. ... [I]ntroduction into practical use [of the 1980 contracts] has been slow due largely, it may be surmised, to the complication and difficulty of comprehension of its draftsmanship."

Despite the criticism, JCT contracts would appear immune to change, due in no small measure to the institutional framework of the JCT and its contract drafting process.¹⁰

Whilst the JCT drafting process is of course not identical to either the JCC or the AS2124 processes, there are sufficient similarities to support the conclusion that a consensus process for production of construction industry standard forms is, to put it mildly, less than ideal.

3. UNDERSTANDING STANDARD FORMS

There has in recent years, in the wake of the Giles Report¹¹, been a limited amount of research into the use of standard form contracts in the Australian construction industry. This article deals with the two most referred-to works and demonstrate that insufficient recognition is currently given to the fact that the consensus drafting process outlined above, rather than achieving equity between the parties to a construction project, leads to an inefficient allocation of risk and is conducive to claims and disputation.

3.1 No Dispute

In 1990 the Report of the National Public Works Conference/National Building & Construction Council Joint Working Party was published. Entitled "*No Dispute: Strategies for Improvement in the Australian Building & Construction Industry*" ("**No Dispute**"), the report had the following to say about standard forms of contract:

"6.1 Contracts, in a perfect world, should give expression to allocations of obligations and/or risk arrived at rationally, and in a free market. This approach would (or might) mean a unique set of conditions for each project. Convenience and the occurrence of similar obligations and/or (sic) risks in most projects of like characteristics, dictate the use of standard forms of contract.

6.2 Standard forms of contract are preferred by the industry to contracts that are individually drafted for each project, if for no other reason than that as both parties are more likely to be fully familiar with the obligations assumed by

each party using a standard form, they will thereby reduce incidences of dispute caused by concealing obligations in unfamiliar documents."¹²

No Dispute recognised that standard forms, as such, fail to provide the necessary flexibility for project delivery and suggested that the industry should ultimately aim for a suite of clauses which can be selected following choices by owners on a logical "decision tree" in relation to the fundamental issues which need to be considered when deciding the appropriate delivery system for each project¹³.

However, No Dispute clearly endorsed the production of standard form contracts via the consensus process:

"6.4 Standard forms of contract that have been developed through consensus by industry bodies representative of the whole industry are to be preferred to contract forms that have not been negotiated with industry because:

- *they are recognisable;*
- *precedents exist as to their interpretation;*
- *they appeal to the widest range of Contractors and Principals; and*
- *they have an equitable share of obligations and/or risks.*"¹⁴

A glaring deficiency of No Dispute is its failure to acknowledge the level of commercial uncertainty generated by industry standard forms, and the fact that the "compromise" risk allocation arrived at by the consensus process will be unacceptable (albeit understood) to industry participants.

Of the reasons given by No Dispute for the preference for standard forms, only that of being recognisable has any persuasive value. However, the value of recognition is of little comfort to builders or owners who are ambushed by deficiencies inherent in contracts produced by the consensus process.

3.2 CIDA Analysis

As part of its charter of implementing the Federal Government's Construction Industry Reform Strategy, the Construction Industry Development Agency ("CIDA") established a Contractual Relations Action Team ("Action Team") which had as its objective improvement in contractual practices and relationships in the Australian building and construction industry.

Although unable to rise above the shibboleths of industry consensus to establish any new way forward in the area of contractual relationships, the Action Team did however contribute usefully to the debate on the development of industry standard forms by publishing the Standard Building & Construction Contracts Users' Guide ("CIDA Users' Guide") which dealt at some length with three standard forms used in the Australian construction industry, namely JCC, AS2124-1992 and the Department of Defence Head Contract. The User's Guide identifies JCC and AS2124 as "consensus" documents and the Department of Defence Head Contract¹⁵ as an "owner-focused" standard form, developed by consultation with industry, rather than by

industry consensus.

The CIDA Users' Guide is useful in a number of respects. It identifies in some detail how the standard forms deal with, and respond to, the key issues affecting the construction process, namely:

- risk allocation;
- the management of time, cost and quality;
- communications between the parties;
- the role of the superintendent;
- management of provisional sum items (with particular reference to the role of nominated sub-contractors);
- security arrangements; and
- dispute resolution.

The work of the Action Team coincided with the completion of AS2124-1992 (first published in 1993) by Standards Australia and the putting to use by the Department of Defence of its standard forms of contract with an accompanying suite of user guides and manuals. Although the promise of contractual reform arising from No Dispute was intended to be fulfilled by the new edition of AS2124, it was revealed during the work of the Action Team that the document was to be seriously flawed. This had become clear from the serious reservations concerning the draft expressed by organisations as disparate as the MBA and BOMA. Nevertheless, throughout the work of the Action Team, those industry figures closely involved in the revision of AS2124 promoted it as the next major step forward for the Australian industry, motivated no doubt in part by a reluctance to give up the "advances" achieved on behalf of particular industry sectional interests in the consensus drafting process.

3.3 The Standard Forms

Annexures A, B and C to this article, analyse the two consensus-based standard forms of contract recognised by CIDA, AS2124-92 and JCC-C&D, as well as the recently produced AS4300-1995 for design and construct work. It is beyond the scope of this article to repeat the analysis undertaken in the CIDA User's Guide, but rather to highlight some of the problems associated with the use of these consensus-based documents.

Careful analysis of these three standard forms leads us to the inevitable conclusion that few owners or contractors, given an informed choice, would wish to use any of these major standard forms in their unamended state. This only serves to highlight the problems and limitations of the consensus process in the development of standard form contracts.

4. STANDARD FORMS AND GOVERNMENT

4.1 Public Sector Project Delivery

Public sector project delivery is strongly influenced by the public sector construction agencies who deliver projects on behalf of their ultimate users, and discharge a service function for those users. For example, Works Australia (formerly Australian Construction Services) states its objective as "[t]o provide construction design and

management consultancy services for national and international projects¹⁶”, and describes its “core business” as providing:

- professional consulting services, which include architectural design and documentation and multidisciplinary engineering documentation and design;
- project management services, which include project management, construction management and construction supervision; and
- laboratory services which include testing of building products and materials, to Commonwealth departments and authorities.”¹⁷

The New South Wales Department of Public Works and Services¹⁸ (“Public Works”) lists the following as its “key service areas”:

*“Innovative quality solutions, risk management property services, construction industry reform, non-build/build service delivery, commercial services and high quality advice...”*¹⁹

For the purposes of this article it is useful to regard the public sector construction agencies comprising the National Public Works Council (“NPWC”)²⁰ as having interests more closely aligned with those of the private sector construction professionals, than with the interests of users of the construction product.

4.2 Recognition by Government of Standard Form Contracts

Until recently, the vast majority of public works delivered in Australia were constructed using the National Public Works Council Edition 3 standard form of contract (“NPWC3”)²¹, developed by the NPWC. It has enjoyed a high degree of recognition, with a number of court decisions interpreting its provisions²². Although regarded as a good example of an “owner-focused” document, drafted with the needs of consumers of construction services in mind, it is relevant to observe that the NPWC process itself involved the bringing together of the views of a number of government construction agencies from many different markets involved in the delivery of different products. It also excluded a number of major public sector consumers of civil engineering services such as road and rail construction authorities.

The heavy involvement of NPWC representatives in the development of AS2124-1992 and the subsequent adoption by some agencies of this form of contract has also contributed to a decreasing use of NPWC3²³.

4.2.1 Public Works’ C-21 Contract

The first departure from Australia-wide use of NPWC3 by public sector construction agencies came when Public Works adopted AS2124-1986, but with modifications to suit its own requirements. However, rather than continue using an adapted standard form, Public Works are currently involved in the development and implementation of its own construction contract known as Century 21 (“C-21”)

for use on Public Works construction projects. As such, it is an owner-focused construction contract.

In its own words, Public Works aims to develop “a new 21st Century Contract that will complement and reinforce the wider industry reform agenda, especially in the areas of partnering and Best Practice.”²⁴ It is understood that the contract is just past the drafting stage, and is soon to be trialled. Public Works projects that by June 1997 C-21 will be used for all Public Works construction projects.

At this stage little is known about the drafting content of the C-21 contract, although it is understood to possess two central elements:

- (i) its “core attributes”, in the form of specific clauses in the contract; and
- (ii) best practice attributes which are operational methods, to be implemented by those using the contract, including teamwork, open communications, issue resolution procedures, good faith and clearly defined roles.

The C-21 core attributes are expected to encompass clearly defined risks and responsibilities, and a minimum of clauses so that reliance must be placed on common law principles. It is anticipated that the office of superintendent will be removed, and a heavy emphasis will be placed on early notification of claims, formal issue resolution procedure, alternative dispute resolution and targets for cost, time and quality.

4.2.2 The Defence Suite of Contracts

A recent example of the development of owner-focused standard forms are the Defence suite contracts, one of which was identified in the CIDA Users’ Guide as “one of the leading standard contracts in or being introduced into the market” at the time of the publication of that guide²⁵. These contracts are prepared by the Department of Defence to meet the needs of its facilities projects on which it expends over half a billion dollars per year.

Given its substantial annual expenditure, Defence wished to ensure that services were consumed on the basis of standard forms of contract, with the appropriate standard form being chosen in respect of each project. The need for “one off” consideration of the terms of general conditions for each project is thus avoided provided the needs of a particular project are met by one or other of the standard form methods of delivery. The Defence suite consists of:

- (i) Major Works Contracts for the Construction of Facilities which, in turn, include:
 - Head Contract;
 - Trade Contract;
 - Design & Construct
 - Document & Construct; and
 - Managing Contractor;
- (ii) Facilities Contract for Medium Works; and
- (iii) Short Form Facilities Contract for Minor Works.

Each of the Major Works contracts have an accompanying User’s Guide which explains the application

of each contract and sets out criteria to assist users in the selection of the appropriate form of delivery method (and therefore the appropriate form of contract) for each project.

To complete the matrix of contracts necessary in the construction of major works projects, a Consultant's Agreement has also been published to ensure compatibility between the form of contract chosen from the Major Works suite of contracts and the Terms of Engagement entered into with Design and other Consultants, superintendents and project managers.

The Minor Works Contract has been designed for the 40,000 or so minor works projects up to a value of \$250,000 which Defence commissions annually. It consists of only eight pages and, rather than being presented in traditional text, is set out in an easy-to-follow flow chart. The Medium Works Contract is substantially larger and is designed for medium-sized works. Although not set out in flow chart form, it also adopts a user-friendly plain English format which is quite different to that used by the standard forms.

Both the Minor Works and Medium Works contracts are specifically designed to be user-friendly documents. The aim is for the contracts be seen as workable documents which can be taken onto construction sites and understood by site personnel who are not necessarily trained as legal or contracts officers. The Medium Works Contract can be used for both traditional and design and construct delivery.

Due to the extensive process of consultation by Defence with industry during the currency of the drafting process, these contracts may be regarded as "consultative" owner-focussed documents. The Defence documents, in contrast to the standard form contracts discussed in this article, do not suffer from any of the by-products of the consensus process, but nevertheless introduce a high level of predicability into the commercial conditions for the provision of construction services for Defence.

5. THE OWNERS' STANDARD FORM

BOMA was formed in 1969 to enable building owners to meet, share views and advance the quality and influence of the commercial property industry. Its primary aim is to protect and represent the interests of members, which include owners, managers, investors, developers, agents and suppliers of products and services.

BOMA is currently in the process of investigating the development of its own standard form contract to serve the needs of its members. However, in comparison to the other standard form contracts, including the Defence suite, BOMA has chosen not to enter into consultation with industry participants.

The new contract is still in the drafting process and BOMA has to date made no public criticism of the JCC contracts. Presumably, use of the JCC contracts will not be discontinued unless the new contract is approved by its Board. Indeed, BOMA is stressing that, at this stage, there is no "BOMA Contract".

Although BOMA members are predominantly owners, the Committee overseeing the drafting of the contract comprises interests as diverse as solicitors, architects,

consultants and project managers. The BOMA drafting process began with the development of "BOMA Principles" which comprised the client's agenda and twenty one points setting out BOMA's position on the main elements of the construction contract. These Principles have essentially formed the foundations for a drafting process which has sought to achieve simplicity, clarity and precision in its end product.

The aim of the BOMA exercise is to take a "fresh" look at each element of a construction contract, going back to first principles and building from there. The analysis includes, but is by no means limited to, the following areas:

- nominated subcontractors;
- bills of quantities;
- third party certification of work;
- variations;
- delay;
- staged completion;
- good faith;
- continuous improvement and best practice; and
- partnering.

It is expected that the contract will, in comparison with the standard forms currently available in the marketplace, demonstrate more precise drafting, with clearer risk allocation and more simplified contractual procedures, and an absence of excessive verbiage and cross-referencing between clauses.

BOMA recognises that an effective contract is not one which shifts all the risks and responsibilities onto the contractor. The aim is to produce an innovative contract which both parties will be prepared to sign, with an emphasis on clearly defined responsibilities and use of plain english.

6. CURRENT TRENDS IN THE AUSTRALIAN CONSTRUCTION INDUSTRY

The Australian construction industry has seized the opportunity presented by the recent economic downturn to find better ways of doing business. Standard forms potentially have a key role to play in leading, and reinforcing, industry reform. It is intended to now identify a number of industry developments with which it will be necessary for standard forms to keep pace if they are to contribute positively to the development of the industry, and remain relevant to what is actually happening in the market place.

6.1 Project Partnering²⁶

Partnering is one of the newer mechanisms being adopted by construction industry participants to avoid, or at least minimise, the incidence of disputes. It is an exciting concept which has the potential to lead to the delivery of projects on time, within budget and with minimal disputation. Indeed, partnering has been recognised by CIDA and Royal Commissioner Gyles²⁷ as a potentially valuable project delivery system. It can involve the formation of a long term commitment between two parties (often referred to as "Strategic Alliances"), or be restricted to a particular project ("Project Partnering").

Project Partnering involves a commitment by the parties to co-operate, in a spirit of goodwill and fair dealing, to the successful completion of the project. The parties enter into a Partnering Charter, which is said to overlay an organisational structure and moral contract onto the traditional contractual arrangement.²⁸ The works contract between the parties is said to establish the legal relationship between the parties whilst the partnering arrangements establish the working relationships between the parties. Although commonly regarded as a non-contractual project management process²⁹, partnering has the potential to impact upon the legal relationships and allocation of risk established by the works contract entered into between the owner and the contractor, as well as other subsidiary contracts such as sub-contracts and consultants agreements. Thus, contracting parties need to consider carefully how, if at all, they wish to modify the framework of rights and obligations in the formal construction contracts in order to avoid the partnering process impacting on the agreed risk allocation.

There is a substantial and growing body of reliable anecdotal evidence to suggest that the benefits of Partnering in Australia, to date, are real and significant. The most important being the improvement in communication between the parties to the construction process. The experience of Public Works is illustrative of the anecdotal evidence to date on the benefits of Partnering, with infrastructure projects comprising different values and delivery systems, including hospitals, universities, TAFE colleges, schools and civil projects. In its 1994-95 Annual Report, Public Works had the following to say about Project Partnering:

"The Department of Public Works and Services has adopted a flexible approach to partnering, tailoring it to suit the needs of individual projects. Partnering was adopted on a trial basis on 20 per cent of projects valued at over \$5 million in 1994/95.

An assessment of partnering on these projects indicated that improved project outcomes have been achieved on partnered projects, in comparison with non-partnered projects over a similar period. The results have encouraged the Department to consider extending the use of partnering.

It is predicted that the partnering approach will improve completion time, reduce disputes and litigation, improve relationships, enable early settlement of variation claims and improve site safety"³⁰

Co-operation, good faith and fair dealing are essential to the success of a partnering arrangement.³¹ There has been much discussion recently about whether there exists in Australia an implied positive duty to perform a contract in good faith,³² and to date the position remains uncertain.³³ To avoid uncertainty about the impact of such a duty upon the legal rights of the parties, the issue should be clarified by express provisions in the contract.

The partnering process is characterised by free and

open communication on an informal basis between the parties in order to successfully resolve issues as they arise. During such communications, parties may conduct themselves, or make representations which are inconsistent with the provisions of the contract. This may lead to assertions that a party has waived its contractual rights, or is estopped from relying on them. Accordingly, parties must take care to ensure that their contractual rights are not compromised. This can be achieved by incorporating a procedure into the partnering charter which must be followed if in fact a party is to be denied the right to insist on performance in accordance with the contract arising from arrangements which may attract the operation of the doctrines of waiver or estoppel. Alternatively, each agreement which alters the position which would otherwise exist under the contract should be recorded as an amendment to the contract, or reflected in the original contract.

The partnering process may give rise to fiduciary obligations where the relationship between the parties indicates that they are putting themselves in a position where they are placing reliance upon each other to act in each other's interests. The parties to a partnering arrangement must therefore consider formally clarifying whether they owe fiduciary obligations to each other which impinge upon their freedom to act in their own self-interest.

To ensure that the benefits of the partnering process are maximised, participants should be prepared to enter into the relationship on the basis of full and frank disclosure. To ensure that good faith disclosures and concessions do not in practice become limited (and so the whole process frustrated) issues of privilege and confidentiality should also be addressed in the contract.

At present, and for the reasons outlined above, none of the standard form construction contracts available in the market are suitable for use in partnered projects. According to Public Works, the C-21 Contract it is currently in the process of developing "will complement and reinforce the wider industry reform agenda, especially in the [area] of partnering."³⁴

However, unless particular care is taken in the drafting phase:

- (i) the contractual regime may in fact frustrate the Partnering process, thereby negating any potential benefits which may be gained; and
- (ii) participation in the Partnering process may compromise the parties' rights under the contract.

6.2 Strategic Alliances

New project delivery systems are emerging in which parties form ongoing "Strategic Alliances" spanning multiple projects. The concept is similar to Project Partnering detailed above, however the partnership endures beyond any one specific project. This system demands that the parties discard their traditional approach to contracting.

In conventional contracting an ill-advised owner, from its position of superior bargaining power, may seek to place as much risk and as many obligations on the contractor

as it can. In this situation the reaction by the contractor is defensive, as it seeks to preserve (or advance) its interests. For example, a successful low-bidding tenderer may scan the contract for "loopholes" in order to boost its profits or recover losses. This "contracting culture" does not enhance the development of a climate of goodwill and fair dealing between owners and contractors, and works against the establishment of ongoing working relationships.

The aim of the Strategic Alliance is to establish a climate of fair dealing and goodwill between the parties, and build a relationship of trust over the course of a number of projects. For the relationship to endure, the parties will have to foster and develop jointly acceptable objectives and practices. The ongoing nature of the commercial relationship between parties to a strategic alliance renders conventional contracting obsolete and requires a new approach to the allocation of risk.

6.3 Project Co-operatives

The Project Co-Operative is the logical extension of Project Partnering where all parties to the process enter into a formal commercial arrangement reflecting their common interests in the successful outcome of the particular project. The concept has its origins in off-shore oil and gas projects. As with conventional construction projects, a number of contractors (having respectively some design, construction and/or installation responsibility) enter individual contracts with the owner. In addition to these individual contracts, all relevant participants in the project co-operative (including the owner) enter into a multi-party agreement setting out the framework for delivery of the project. This agreement effectively takes the form of a joint venture.

Each service provider's remuneration is broken into two components:

- (i) Costs; and
- (ii) Profit and Overhead.

Service providers receive their Costs according to the terms of their individual works contracts, but under the multi-party agreement recovery of the Profit and Overhead component is dependent upon the collective performance of all service providers. Performance of the co-operative is measured against relevant project benchmarks such as the aggregate of costs payable to all service providers and actual operating costs. An increase or reduction in the benchmarks will impact on each party's recovery of Profit and Overhead under the multi-party agreement. Resultant gains are shared between the parties in agreed percentages.

It is obvious that the commercial interest of all parties are closely related to project success which depends on them all working together. The legal issues and relationships are far removed from the traditional contract structure, and consequently requires a new approach to the preparation of contract documentation.

6.4 Alternative Forms of Project Delivery

Apart from the new delivery systems detailed above, the industry is using many forms of project delivery other

than the traditional lump sum or schedule of rates contracts for the delivery of works designed by the owner's consultants. However, with the exception of AS4300, the standard form contracts available in the market are designed for traditional project delivery involving contracts let by owners for construction of a design prepared by the owner's consultants on either a lump sum or a schedule of rates basis. Indeed, none of the standard forms available to industry participants are suitable for the following forms of project delivery:

6.4.1 Engineering Procurement and Construction Management (EPCM)

This form of project delivery is common in major process engineering projects. The EPCM Contractor is responsible for organising both design and construction. It normally does a substantial amount of the design itself, but acts as agent of the owner for the letting of procurement, erection and construction packages to contractors who contract directly with the owner.

The EPCM contractor normally has limited legal liability for time, cost and performance of design, manufacture and construction.

6.4.2 Design Construct and Maintain

This arrangement comprises a Design and Construct agreement coupled with a long term contract for the operation and maintenance of the project. This method is conventionally used for the delivery of infrastructure, where the principal (ie, Government) retains ownership of the project, whilst the contractor assumes responsibility for all other aspects of the project, including design, construction and operation.

6.4.3 Build, Own, Operate, Transfer (BOOT)/Build, Own, Transfer (BOT)

BOOT or BOT are the terms used to describe the method of project delivery principally used in the delivery of infrastructure whereby private sector interests undertake to build infrastructure, usually under a Design and Construct arrangement, and then operate the facility for a set period (usually referred to as the franchise period), before ownership is transferred back to the principal (ie, Government).

This is a complex arrangement involving numerous parties. Private sector interests, usually known as Sponsors, set up a company known as the Project Vehicle, and arrange for the design, construction, commissioning and operation of the project. Ownership of the infrastructure vests in the project vehicle during the predetermined franchise period, after which ownership is transferred back to Government.

BOT infrastructure projects are prevalent throughout Asia, and have been used in the delivery of numerous Australian infrastructure projects. Indeed, Public Works views BOT projects thus:

"The involvement of the private sector in the development, funding and operation of public infrastructure is seen as a key to the future ... Risks and

rewards are equitably shared between the public and private sectors."³⁵

6.4.4 Build Own and Operate (BOO)

This is pure privatisation. Infrastructure is designed, built, operated and remains in the ownership of private enterprise in perpetuity. It is, in substance, the same arrangement as outlined above, but without the transfer to Government at the end of a set franchise period.

6.4.5 Managing Contractor

A Managing Contractor is the party engaged by the owner to design and construct the project.

Design and construction is usually carried out by subcontractors to the Managing Contractor, who are appointed by the Managing Contractor in consultation with the owner.

The cost of subcontracts for design and construction is usually reimburseable subject to a responsibility for cost management or a guaranteed maximum price. The owner is able to retain a high level of control over the project, particularly in relation to the design and quality of the work, and can ensure that appropriate subcontractors are engaged by the Managing Contractor for prices which are competitively tested in the market.

6.4.6 Construction Management

The term "Construction Management" is often used to describe what is dealt with above as Managing Contractor, with or without responsibility for design co-ordination. Usually the construction work is carried out by direct trade contractors rather than by subcontractors. It is obviously applicable where the entity engaged is not a risk taker or contractor and thus does not purport to offer actual construction services. It can apply appropriately to professional or small companies who market the skills of construction co-ordination and offer a service which compliments the owner's own resources.

The existing industry standard forms are unsuitable for use with the alternative forms of project delivery detailed above. At present these standard forms work against the efficient delivery of projects by the above methods in two respects. Firstly, simply amending a standard form may create a risk allocation inappropriate to the particular project, and project delivery system. Secondly, the unavailability of standard forms of contract for use with non-traditional delivery systems may preclude the parties from giving due consideration to these alternative methods when deciding on a project delivery vehicle. It was for these reasons that the Department of Defence developed its suite of standard forms.

7. DEALING WITH THE HARD ISSUES

There are a number of difficult issues on which construction professionals and contractors have different views. These issues are usually not addressed clearly, or at all, in consensus driven industry standard forms because of the difficulty in reaching agreement upon them. If they

are addressed, the standard forms often do not reflect the legitimate needs of owners due to the influence of other interests upon the consensus process.

It is proposed to identify some of these hard issues for the purpose of illuminating the challenges facing standard forms in the near future.

7.1 Nominated Sub-Contractors

The nominated sub-contractor system allows the owner to select sub-contractors, but without incurring any direct contractual links with them, thus preserving the traditional method of contracting and the chain of liability vesting ultimate responsibility in the head contractor. One of the problems that has arisen in recent years concerns the head contractor's liability for the actions of a nominated sub-contractor and in particular the "duty" of the owner to re-nominate a sub-contractor where a nominated sub-contractor is no longer able or willing to complete the work entrusted to him due to death, liquidation, bankruptcy or repudiation.

In a landmark decision in this area³⁶, the English House of Lords held that the head contract contained an implied term obliging the owner to nominate a new nominated sub-contractor as a consequence of the default through insolvency of an original nominated sub-contractor. Although now referred to as the "Bickerton principle", the case did not lay down a general rule, and so the decision in each case depends upon the particular terms of the contract.³⁷

For the reasons set out in the Annexures at the end of this article, neither AS2124-92 nor JCC-C&D adequately deal with the risk of nominated sub-contractors, nor do they provide any alternative system to overcome the inherent problems of this arrangement. To the contrary is the owner-focused Defence Head Contract.

Defence as a Principal has decided against the use of the nominated sub-contract system and put in place under the Defence Head Contract an alternative which does not have the legal and commercial disadvantages of the nominated sub-contractor system. It sets out a cooperative and consultative arrangement for joint selection of sub-contractors to perform provisional sum work. The Principal is able to choose (subject to contractor objection and suggestion) the pre-qualified sub-contract tenderers, whilst the head contractor receives the benefit, denied to it under the nominated sub-contract system, of input into the identity of sub-contractors with whom it can work cooperatively, and in whom it can repose confidence.

The sub-contractor awarded the provisional sum work is, viz-a-vis the contractor, in the same position as a domestic sub-contractor with no confusion commercially or legally over who controls and manages the sub-contractors. Should a jointly selected sub-contractor default, the contractor, subject to the Principal's approval, has discretion to engage others to complete that work. There is no blurring of the contractual chain of responsibility as on appointment the jointly selected sub-contractor is for all purposes in the same position as an ordinary domestic sub-contractor to the head contractor.

7.2 Security

Most construction arrangements require the contractor to provide some form of security to ensure performance of its obligations under the contract, or for a percentage to be retained from progress payments to act as a "buffer" against their inherently approximate nature. The point at which the owner will become entitled to call upon security, or use the retention, is of critical importance. As noted in the Annexures, the wording in JCC causes uncertainty as to the point at which the owner becomes entitled to security, and the provisions of AS2124 and AS4300 effectively destroy the owner's ready access to security.

7.3 Entitlement to Extension of Time

There is a common misconception in the construction industry that "neutral" events (or events beyond the control of the contractor), such as inclement weather, will automatically entitle the contractor to an extension of time. This is simply not the case. The risk of delay for such events lies with the contractor unless the contract clearly provides to the contrary. JCC, AS2124 and AS4300 all fail to clearly set out who must bear the risk of neutral delays.

As noted in No Dispute,³⁸ prompt notification of delays allows for co-operative management of the cause of the delay in order to reduce its consequences. Possibly the principal's only remedy, if denied an early opportunity to manage the time and cost consequences of a delay, is breach of contract at common law. Thus the standard form contracts, in order to encourage "early warning" of delays, require the contractor to advise of delays promptly after the delay is identified. (Defence requires notification within 7 days, AS2124 "promptly" and JCC within 20 days of the cause of the delay arising).

Further, it is the Superintendent, acting as agent for the principal, who is responsible for the day-to-day administration of the contract, and who in practice will be aware of actual and potential causes of delay. Neither AS2124, nor JCC impose an obligation on the Superintendent (or Architect in the case of JCC) to provide such notification to the builder or owner.

7.4 Bills of Quantities

Some private and public sector owners have indicated that they will not produce or use bills of quantities for any further contracts. The reason why some owners have adopted this position is to leave the risk of pricing the works with the tenderers. Whilst each of the standard forms can accommodate the situation where an owner does not issue a bill of quantities to tenderers, the question arises of how the valuation of variations will be dealt with.

Commonly the rates and prices inserted in a bill of quantities will (where appropriate) be used for valuing a variation. If there is no bill of quantities what rates and prices will be used in valuing variations? None of the standard forms adequately deal with the situation, as each of these anticipate that in the first instance variations will be valued by using rates and prices set out in the bill of quantities prepared by the owner.

7.5 Acceleration

Most standard forms provide for extensions of time for delay. However, where time is financially and commercially critical to the economic viability of the end product, many owners would prefer to direct contractors to accelerate (and pay the costs of that acceleration) rather than grant extensions of time to the date for practical completion. The absence of provisions giving the owner a power to order acceleration and a formula for compensation for acceleration costs means that an owner is at the mercy of the contractor when acceleration of the works is the preferred option to extending the date for practical completion. As noted in the Annexures, neither AS2124, AS4300 nor JCC makes provision for acceleration.

Provisions are now being inserted in contracts which enable owners to require contractors to undertake steps of acceleration as an alternative to the grant of extensions of time. The key aspects of such provisions are:

- (a) identification of particular measures of acceleration;
- (b) the mechanism for compensation for the costs of particular measures taken to accelerate; and
- (c) how to measure the effect of acceleration.

These issues are not resolved by legal drafting alone although particular care taken in the drafting of these provisions does provide a sound basis for contract administration to avoid entitlement to costs becoming an open cheque book to be filled in at the end of the job.

7.6 Quality Control

One of the "hot" topics in the industry is quality assurance control. From a legal point of view the issue of quality control needs to be thought through carefully. It is wrong to assume that because the quality of work carried out in the building industry is low, there needs to be amendment to the provisions of the contract regarding the allocation of risk for defective work.

The risk allocation in respect of defective work is fairly clear and is weighted heavily against contractors. Owners' rights with respect to defective work are considerable. The need for more attention to be paid to quality assurance arises not because of the legal position but because of the practical difficulties which an owner faces in actually enforcing its rights in relation to defective work. The losses incurred as a result of work being done defectively in the first place are not often commercially compensated by the legal remedies available.

7.7 Best Practice

The overriding objective of Best Practice is improvement in the performance of the Australian construction industry by the implementation of management and operational practices to achieve continuous improvement and cultural change in the project delivery process.

The drive towards achievement of industry Best Practice is the product of a refusal to accept continuing poor productivity performance in the Australian construction

industry, in comparison with world standards. According to CIDA:

*"It is absolutely critical for all construction enterprises who want to do business with Government on big league contracts to embrace the quality journey to best practice."*³⁹

CIDA sees the reform process as a team effort, involving all players in the construction industry.⁴⁰ In its publication *Building Best Practice in the Construction Industry: A Practitioner's Guide*, CIDA sets out the following five phases on the journey towards Best Practice:

(i) Awareness

- What is Best Practice?
- How does it apply to our enterprise?
- What benefits can we expect?

(ii) Diagnosis

- Are we ready for Best Practice?
- How far have we progressed already?

(iii) Implementation

- What are the key success factors?
- How should we manage the changes?

(iv) Review

- How should progress be reviewed?
- Who should be involved?
- What typical outcomes should be expected?⁴¹

The aims of CIDA's Best Practice strategy are to:

- (a) close the gap between Australian and international productivity levels;
- (b) reduce current levels of waste in the delivery process;
- (c) make client satisfaction the key focus of the process; and
- (d) improve profitability.

Achievement of Best Practice will require a fundamental change in attitude by industry participants, as well as comprehensive and sustained implementation of strategies for continuous improvement.

7.8 Dealing with Claims

In many projects a significant amount of time and energy goes into positioning for, and dealing with disputes, usually revolving around the contractor's claims for time or money (or both). The method in which traditional contracts deal with claims and disputes lead to "closed books" and entrenched positions.

It is in the interests of both parties to a contract to quickly identify events or claims which have the potential to cause disputation. In the context of an owner/contractor relationship, the sooner the owner is made aware of the possibility of a claim for additional payment or the need to resolve an issue of quality or performance, the greater its ability to adjust finance, budgets or designs to address the particular issue. It is also in the contractor's interest to

recognise the need to make claims early, have them quantified and paid, and get on with its performance of the contract. Despite this, contractors often delay making claims until late in a project and as a consequence, these claims may take the owner and its advisers by surprise, producing a reaction of resentment and hostility. Although it must be recognised that the generation of some initial resentment upon the making of a claim is difficult to avoid, such sentiments are far better dealt with if raised at a time when both parties have a range of commercial options available to them (as they often will during the currency of a project) and when the facts are not forgotten or confused.

For this reason it is suggested that early warning provisions, which require a party asserting a claim to do so within a set time-frame after the occurrence of the events giving rise to the claim, are a positive step towards minimising the costs of disputation and enhancing the effectiveness of any dispute resolution mechanisms subsequently undertaken. It is true that such provisions increase the resources required for administration of the contract from the point of view of both parties. However, the cost of these resources pales into insignificance against the costs involved in the resolution of an intractable dispute.

Many owners (and some informed contractors) are seeing the benefit of having claims resolved as soon as they arise rather than being left to the end of the project for determination. If this is to be achieved, there need to be contractual provisions dealing with the notification of claims and obligations for the resolution and payment of those claims, such as early warning provisions. To ensure less time is spent "resolving" claims (as opposed to processing them) the contract should encourage greater communication concerning claims and disputes. At the moment the only "encouragement" to contractors comes from the sanction that notice clauses usually contain time bars. Further, extra-contractual claims often arise because there is no contractual mechanism under which the contractor may recover.

As noted in the Annexures, JCC contains no general provision requiring the notification of claims. Although AS2124 bars certain claims not made in accordance with clause 46, the effectiveness of the provision is uncertain and the owner remains vulnerable to a number of claims beyond the scope of that clause.

7.9 Standard Forms as Part of the Construction Process

The general conditions of a construction contract must not only reflect the risk allocation agreed between the parties and appropriate to the chosen delivery system, but must also contribute to the efficient and successful administration of the construction process. One often hears senior site personnel (from both contractor and owner) proudly boasting that "the contract" was not taken out of the bottom drawer for the whole of the project. This is fine where the project meets the commercial expectations of the parties, but if the contract is retrieved from the bottom drawer after the project has gone "off the rails", it

is often found that work performed and actions taken in the delivery of the project do not accord with what was contemplated by the contract. In these circumstances, those who are proud of their ignorance of the contract are often the first to take advantage of its terms for the purpose of pursuing or defending claims. Best practice demands that the risk allocation charter of the parties be closer to the surface of the projects. To this end, the contract must:

- be in plain English, easily understood by all involved in the project, not just the contract managers;
- reflect the process which is followed in construction by:
 - dealing with risks in the order in which they are likely to occur in the project;
 - dealing with notice provisions, extension of time administration and variation administration in a manner capable of easy administration, given the nature of the project and the resources available to the parties;
- be backed up by administrative instructions or manuals which explain the use of the contract during bidding and project implementation; and
- avoid "fudging" the risk by allowing unnecessary argument over the meaning of provisions of the contract, and not coming to grips with key commercial issues in the construction process (this issue is discussed in some more detail below).

7.10 "The Law"

Many industry participants resent the fact that the law is able to intrude into the project delivery process and, in their view, "ambush" the project.

However, the reality is that those parties who protest the loudest at the intervention of the law into the project delivery process are themselves incapable of evaluating the ramifications of their actions, both at the pre-contract stage, and during the currency of the contract administration. This lack of understanding breeds frustration at the capacity of parties to use the law to achieve valid commercial objectives.

All participants in the Australian construction industry must appreciate that they are contracting within a sophisticated, developed economy with a mature and complex commercial legal system. Detailed laws and enforcement mechanisms are in place to enforce the validly existing rights of contracting parties.

Thus, when entering into a contractual relationship, parties must ensure that they:

- (i) do it carefully;
- (ii) with full knowledge of the potential pitfalls; and
- (iii) employ expert legal advice when concluding the contract.

Further, in the administration of the contract participants should be fully cognisant of the impact a proposed action may have upon the contracted risk allocation.

8. CONCLUSION

The challenges identified above are daunting. No doubt these are not exhaustive. It is immediately apparent that the process of development of industry standard forms is unlikely to keep pace with the changes in contracts necessary to meet many of these challenges. Further, the process shows no sign of being able to deal unambiguously (or indeed at all) with the hard issues. Nevertheless, there will continue to be development of, at least, AS2124 and it will be promoted (albeit with amendments) by members of the NPWC, and others. It is also likely that JCC will continue to be used. Thus the industry standard forms are unlikely to fall into disuse despite their inadequacies.

If this prediction is correct, the industry standard forms will themselves remain a negative force against reform. The encouragement of their continued use will impede development of innovative solutions to the challenges which the industry now faces and will continue to face in the future.

Certain sections of the industry will however demand contracts that reflect the arrangements necessary to meet the challenges facing the industry. This has already occurred with a number of public sector organisations, including Defence, Public Works and BOMA. There is a degree of increasing accountability of public sector organisations for their actions. In this context, the closer the delivery organisation identifies with the actual end-user of the product, the more focused it will be on finding a process which meets its commercial objectives rather than uncertain policy objectives such as "fairness".

The increasing trend to corporatisation and privatisation of government business enterprises produces a need in those organisations to focus on efficient forms of consumption of construction services. One only has to look at the water resources, electricity, telecommunications and transportation areas to see examples of this having already occurred, and significant potential for this trend to continue in the future. A corollary of this process is the changing role of government construction agencies who, instead of having a policy role, for instance in relation to the type of standard form to be used by government, are increasingly concerned with winning work from these business enterprises. In doing so, they are required to provide a project delivery service which meets the business objectives of the relevant government business enterprise. This includes the implementation and development of new and innovative means of project delivery which those organisation demand to enhance their own business objectives.

This is not to say that the development of specifically tailored conditions of contract will create a lopsided risk allocation. It is trite to observe that business efficiency is not enhanced by a wholesale transference of risk from owners to contractors or consultants. This is clearly inconsistent with effective and accountable project management. Owners recognise that it is preferable to manage and control the risks that are within their competence and expertise, rather than imposing a transfer of all risks under the contract to builders and consultants

(for which they will have to pay). Effective management requires a business-focused decision as to the appropriate project delivery system, and management of the risks inherent in the construction process, rather than a philosophical debate about industry uniformity and fairness. This process of reform, if it is enterprise-based, will inevitably lead to a number of different contractual solutions, each suited to the particular organisation involved.

The pressure for regular consumers of construction services to use standard forms, rather than one-off contracts, will remain and may well lead to the development of various public sector "standard forms", each designed to meet the particular needs of the various public sector organisations. Many organisations are likely to have "suites" of contracts designed to be used on the different types of projects commonly encountered by these organisations. This outcome would not be dissimilar to the "ideal" position identified in *No Dispute*⁴², where it was suggested that the differing needs of organisations and projects would be best met by access to a variety of clauses able to be used to meet the commercial needs of particular users. Despite the desirability of such a format, the need to avoid one-off drafting for each project often requires that all the clauses be put together in a standard form for particular methods of delivery designed for the organisation, rather than using a collection of clauses from a general menu for each project.

In the private sector, regular consumers of construction services also require standard forms. Here it is probable that private sector standard forms will be closer to the "leading edge" than those used by some public sector organisations. This is because the opportunities to enter into strategic alliances, and project co-operatives, are greater in the private sector than in the public sector, in view of the latter's probity and process constraints.

On this scenario, rather than declining in use, the standard form will proliferate. Such a prospect will not appeal to those who, following *No Dispute*, have strived for the holy grail of a single standard form for all sectors of industry and all types of construction work. It is suggested however that this goal is inconsistent with the development of best practice in the industry. Even a superficial review of the challenges discussed in Section 4 of the article discloses that a single industry-wide standard form is inconsistent with meeting most of them. Indeed, commitment to such an objective is likely to entrench mediocre practice and stifle reform.

As owner-focused standard forms are developed to meet the needs of particular public and private sector business enterprises, there will inevitably develop areas of commonality, even where these forms represent a competitive edge for the particular enterprises or their advisers. This has been the case with the Defence standard forms, extracts from which are regularly appearing in other contracts in the industry. The marketplace will recognise and adopt best practice in this regard. In this way standard forms will evolve and develop with the demands of industry, and will influence the one-off contracts needed for

innovative delivery experiments and for the many owners in the private sector who do not do enough work to have their own standard forms and are therefore reliant upon construction professionals and construction lawyers for their project contracts.

A word of caution however concerning "one-off" contracts. The increasing influence of lawyers in such contracts has not always been a positive one from an industry perspective. In the property boom of the 1980s, many building contracts were drafted by lawyers with little regard to commercial reality. In some instances these contracts, which were long and complex and sought to transfer every conceivable risk to the contractor, were against the interests of the clients for whom they were developed. In the owner's interest, a balance is required which takes into account the nature of the project and the business relationship best suited to the delivery of the project. It is not the lawyer's role to determine risk allocation for clients, but rather to contribute as a team member to the achievement of the client's objectives, which in construction, invariably include the successful completion of the project.

Justin Sweet in his paper, "*Standard Construction Contracts: Some Advice to Construction Lawyers*",⁴³ sets out the lawyers' role as follows:

"The construction lawyer who wishes to do a good job for his client first should assemble as many of the standard forms as he can, organise them by contract type, and analyse them. Next he must make a tentative recommendation for the particular transaction for which he has been asked to draft a contract. Prior to making this recommendation, the lawyer should consider whether the owner is best served by a customised contract or by a standard contract. A customised contract should be used if the owner wishes to take a more interventional role, if the architect or engineer is not to perform in the way that design professionals usually perform, and if the contract is to be one with a tight fixed price. Also, if the owner does not prefer arbitration, as built into the standard contracts, a customised contract should be considered seriously. On the other hand, a customised contract is more expensive to prepare and requires great skill. If an attorney does not have the skill and cannot justify the time needed to develop or procure a customised contract, he should suggest a standard contract. If no standard contract fits his client's needs, he should recommend that the client retain an attorney with the skill to draft a good customised contract."

Standard forms should play a dynamic role in the continuous improvement vital to the domestic and international health of the construction industry. There should be a mature recognition that consensus based industry standard forms are congenitally unable to do this and thus they should not be regarded as a positive factor in construction industry reform.

ANNEXURE A: AS2124-1992

AS2124-1992 fails to adequately deal with many issues of vital interest to owners and contractors. The publication of AS2124-92 has led to a plethora of "one-off" contracts as public and private sector owners (and contractors) devise a variety of special conditions designed to meet the deficiencies and problems in the document.

(i) Cost Management

An issue of concern to all owners is the capacity to manage the construction process to keep the project within end budget by taking action during construction to avoid, minimise or overcome the consequences of unexpected overruns in the cost of the works. AS2124 does not provide an adequate framework within which this important objective can be achieved. Deficiencies include:

(a) Bills of quantities

AS2124 uses owner-prepared bills of quantities, providing no alternatives (such as tenderer/contractor formulation of bills), and without placing the risk of pricing the works on the contractor. The Principal bears the risk of all errors in the bill exceeding A\$400.

(b) Delay costs

Under AS2124 delay costs are unpredictable for both owner and contractor. The "extra cost" formula for compensation in clause 36 is left to be calculated on proof provided by the contractor. This places an unnecessary burden on the contractor and deprives the owner of the capacity to predict and then manage the end cost of the project. The uncertainty is increased by preservation of the contractor's entitlement to recover damages if delay is caused by a breach of contract. No warning need be given of a claim for extra costs until 28 days after the expiration of the defects liability period.

(c) Variations

There is no requirement for the valuation of variations prior to commencing work on the variation, nor is there a requirement to have the pricing of the variations settled before the final payment claim.

(d) Notification provisions

In an attempt to deal with the problem of late claims, AS2124 bars claims which are not notified in accordance with clause 46. However, many claims which affect the out-turn cost of projects are not included within this notification provision. There is no requirement for the timely notification of claims "extra" the contract, such as claims

in tort, under the Trade Practices Act or for restitution on a quantum meruit basis. Indeed, these types of claims are on the increase. Further, clause 46 does not apply to claims for extra costs arising from delay, for additional payments for variations, or to any claim for costs which may be made under the contract which is not the product of a superintendent's direction or approval (eg. claims for latent conditions, which are available without any action by the superintendent).

(ii) Security and Retention

Under AS2124, interest belongs to the party lodging the cash security or from whom cash is retained. The money must be kept separate from other moneys belonging to the owner. There is no recognition of the use of retention (or replacement security) as a "buffer" against the inherently approximate character of progress payments.

Further, an owner will not have access to security or retention until after the determination of any dispute as to its entitlement to call upon the security or use the retention. Whilst the intention might be to prevent abuse, these provisions destroy ready access to security and also, in the case of bank guarantees and the like, their commercial equivalence to cash. The owner is deprived of access to cash flow to rectify work it considers to have been defectively carried out by the contractor (but which the contractor refuses to do on the basis that the work has been carried out in accordance with the contract) or complete works from which a contractor has been removed for alleged defaults (where the contractor contests the validity of its removal).

(iii) Collateral contracts

At a time when the law is uncertain as to an owner's rights to take action directly against sub-contractors, there is no attempt in AS2124 to provide for collateral contracts creating a direct link between the owner and the sub-contractor to enable an owner to exercise rights against those responsible for project deficiencies.

(iv) Role of superintendent

There are real difficulties with the way in which AS2124 deals with the role of the superintendent. The first is the requirement for the superintendent to act honestly and fairly in the exercise of all its functions under the contract. Because there is no attempt to differentiate between agency functions and certifying functions, this produces the unworkable consequence that a superintendent is required to act in the interests of a contractor when exercising agency functions.

The second difficulty is that the owner is required to warrant that the superintendent will arrive at a reasonable measure of work or extension of time, and the like. This will make the owner liable for a decision of a superintendent which, though made honestly and fairly, is not regarded as reasonable even though the contractor has the capacity to have that decision opened up and reviewed by the dispute resolution provisions of the contract. This produces a close legal identification between the superintendent and the owner notwithstanding the intention for the superintendent to be independent and is likely to further erode the independence of the superintendent.

(v) Key personnel

There is no provision in AS2124 requiring a contractor to use key personnel whom it has represented to the owner it intends to use in the execution of the work and the identity of whom may have been crucial in the decision by an owner to award the work to the particular contractor.

(vi) Acceleration

AS2124 does not contain any power for the progress of the works to be accelerated to overcome the effect of delays for which the contractor is entitled to extensions of time. This means that an owner who needs to have the works accelerated is at the mercy of the contractor when it seeks to negotiate an arrangement for acceleration.

(vii) Buildability

AS2124 does not provide any mechanism to allow builders or their sub-contractors the opportunity for involvement in review of documentation or to advise on buildability. For instance, there is no mechanism in the contract whereby the contractor is allowed any input into documentation for the packaging and letter of provisional sum work.

(viii) Latent conditions

Clause 12 of AS2124 gives a contractor a right to additional payment where the particular contractor could not reasonably have anticipated physical conditions encountered on the site. This is a subjective test likely to favour inexperienced contractors.

(ix) Variations due to defective work

Under AS2124 where a variation is directed by the superintendent to overcome the problems caused by a contractor's defective work, the contractor is entitled to an extension of time for the time taken to execute the varied work, unless the variation is requested by the contractor under clause 40.4.

(x) Costs for delay to early completion

As a consequence of the wording of clause 35.5,

and the subsequent entitlement to extra costs for delay conferred by clause 36, a contractor is entitled to be paid if it is delayed in reaching a date for completion earlier than the date for completion set out in the contract. AS2124 imposes no constraint upon a contractor's capacity to plan to finish early and thus claim the costs of being delayed from doing so.

(xi) Neutral delays

Clause 35.5 entitles the contractor to extensions of time for neutral events including those "which are beyond the reasonable control of the contractor". This phrase invites dispute. Does it mean events which are beyond the physical, or contractual, control of the contractor? It may well entitle the contractor to extension of time for sub-contractors' defaults over which the contractor has no physical control.

(xii) Dispute resolution

The dispute resolution clause in AS2124 is not a binding arbitration agreement. It does not contain any dispute resolution mechanism to permit binding interim decisions, nor does its structure encourage the parties to attempt alternative dispute resolution prior to resorting to either arbitration or litigation.

(xiii) Nominated and Selected Sub-contractors

AS2124-92 contains a system of selected and nominated sub-contractors.

The selected sub-contractor system has a number of deficiencies:

- the contractor is allowed no involvement in the selection of sub-contractors, and has no right of reasonable objection to the inclusion of a sub-contractor on the list. The contractor is given no remedies or indemnities to cover what may be good commercial grounds for objection;
- selected sub-contract work must be completely specified prior to calling of tenders and is therefore not amenable to fast-tracking;
- AS2124 fails to address the situation where a selected sub-contractor repudiates or abandons the work.

Likewise, the nominated sub-contractor system has many problems:

- the system of nominated sub-contractors carries with it the responsibility of the owner for nominated sub-contractor default;
- there is no obligation for nominated sub-contractors to be contracted on terms and conditions compatible with the head contract;
- there are real legal difficulties associated with the concept of nominated sub-contracts by assignment which in effect defeat the traditional benefit for the owner of the sub-contract arrangement;

- if the right to direct payment is chosen (by inclusion of the optional clause), it is arguable that the contractor is not entitled to any compensation for profit or attendance in relation to nominated sub-contract work;
- it would appear that the contractor is entitled to an extension of time where a nominated sub-contractor drops out because of repudiation or abandonment (clause 35.5), but not where a nominated sub-contractor drops out because of insolvency (except where the superintendent unreasonably delays re-nomination);
- there is a gap in relation to whether the owner or the contractor bears the risk for defective work executed by a nominated or selected sub-contractor who has dropped out.

ANNEXURE B: JCC-C & D

The JCC contracts are standard forms, developed by the Joint Contracts Committee, the constituent members of which are RAI, MBA and BOMA. The JCC has not developed standard forms for use for project delivery strategies other than the traditional one of lump sum delivery of works designed by the owner's consultant.

The JCC contracts possess a number of weaknesses, some of which are identified below. Many of these arise from the consensus process by which the forms are developed.

(i) Cost Management

As with AS2124-1992, JCC does not provide effective procedures to allow the owner to monitor costs during (nor indeed after) construction. Deficiencies include:

(a) Bills of Quantities

The JCC contracts provide the parties with the option of whether or not to use Bills of Quantities⁴⁴. Like AS2124, JCC-C uses owner-prepared Bills which are to form part of the contract. Thus, the risk of pricing the works will effectively lie with the owner rather than it being the responsibility of the contractor to measure and price the works as described in the drawings and specifications.

(b) Delay Costs

Under JCC, a builder must be careful to distinguish delay due to proprietor's breach (for which "damages" are recoverable) and delay due to neutral causes (for which 50% of costs and expenses are recoverable unless a different percentage is specified in the Annexure). There is no provision for apportionment between causes, so that when delay is due to more than one cause, the first occurring cause is deemed to have caused the whole delay.

(c) Variations

Clause 6.10 limits the power of the architect to order variations. Unless otherwise agreed, variations must be within the general scope of the agreement. This provides the contractor with the opportunity to claim that the work ordered by the architect is beyond the scope of the agreement and therefore beyond the power of architect to instruct. The contractor may then claim quantum meruit for work performed.

Like AS2124, JCC does not require the valuation of a variation prior to the Architect issuing a written direction and before the builder commences work.

(d) Notification Provisions

JCC does not contain any general provision requiring the timely notification of claims. The only requirements for notification which are expressed to be conditions precedent to an entitlement are those in relation to delay costs which do not contain specific time limits but use general phrases such as "as soon as practicable" and "within a reasonable time". JCC is silent as to claims not included within the final claim and does not bar claims which are not made within a specified period of the expiration of the defects liability period. In general, claims for monetary compensation need only be notified within statutory limitation periods.

(ii) Security and Retention

The right of the owner to call upon security is limited due to inclusion of the words "in all such cases as if the security were a sum of money due to or to become due to the builder by the proprietor" in clause 10.25.⁴⁵

(iii) Collateral Contracts

As with AS2124, there is no attempt in JCC to provide for collateral contracts creating a direct link between the owner and the sub-contractor. Thus, the owner must rely on the head contractor to exercise rights against a sub-contractor responsible for project deficiencies.

(iv) Powers of the Architect

Under JCC the architect is given a general agency power to act for and on behalf of the proprietor. There is no limitation on the authority of the architect to act as agent of the proprietor, so that any action taken by the architect will be within his authority, ratified and confirmed by the proprietor, provided that action is provided for or required by the general conditions of the JCC Contract. By interaction of the various sub-clauses in JCC, the proprietor is deemed to have confirmed and ratified not only the agency functions but also the certification functions exercised by the architect. The result is that the proprietor warrants the content of the architect's certifications. However, the proprietor has the right to refer decisions made by the architect as part of its certification functions to dispute resolution.

JCC does not empower the Architect to appoint nor to delegate responsibilities to a representative.

(v) Key Personnel

As with AS2124, there is no provision in JCC to require a contractor to use key personnel whom it has represented to the owner will be used in the execution of the work.

(vi) Acceleration

JCC, like AS2124, contains no power for acceleration of the works. Thus, an owner who needs to have the works accelerated to overcome the effect of delays is at the mercy of the contractor when it seeks to negotiate an arrangement for acceleration.

(vii) Buildability

As with AS2124, JCC does not provide any mechanism to allow builders and sub-contractors to the builder to have an opportunity of any involvement in review of documentation or advising on buildability.

(viii) Latent Conditions

A major problem with the manner in which JCC handles the allocation of risk for latent conditions is that it is not governed by one clause, nor do the relevant clauses refer to each other. Thus, an unsuspecting party effectively requires a "road map" to identify all clauses dealing with site conditions and therefore understand its risk exposure.

The time and cost risk of latent conditions is allocated to the proprietor with no provision for risk-sharing (for example, by making the risk allocation subject to the latent condition encountered being one which could not reasonably have been anticipated by the builder on the basis of its own visit to, and examination of the site, and geotechnical information and data made available by the proprietor or available publicly). Nor do the JCC contracts penalise a builder for failure to provide the owner with an early warning notice to allow the proprietor to minimise the cost and time consequences of encountering a latent condition.

A latent site condition is characterised under common law as a neutral event. On this characterisation, should the builder under JCC claim for delay caused by encountering a latent condition "as a cause beyond its control"? Or is it to be claimed as an act, default or omission of the proprietor by reason of the proprietor's breach of warranty given in clause 3.01? Or is it to be claimed under clause 9.07 as a delay consequential upon a variation?

(ix) Accuracy of Site Information

Under JCC the proprietor warrants the accuracy of all information relevant to the site which is contained in the agreement, and that the site will satisfactorily support the works. If there is any difference between the conditions actually encountered and what is shown in the geotechnical data in the contract, or should the conditions, although not described in the contract, give reasonable cause for the builder

to consider that the works are required to be varied, the builder is given a positive entitlement to any additional cost which is to be valued as a variation.

(x) Variations due to Defective Work

JCC makes no provision for the ordering of variations to overcome the consequences of defective work. Clause 6.09.01 empowers the Architect to direct the builder to "amend" any defective work, but does not contain a procedure to have the builder notify whether it considers such direction to be a variation.

(xi) Neutral Delays

As with AS2124, JCC entitles a contractor to an extension of time for "*any cause beyond the control of the builder*". The uncertainty of the meaning of this phrase invites dispute. Must the cause be beyond the actual, reasonable or contractual control of the contractor?

(xii) Dispute Resolution

Although clause 13 provides for compulsory negotiation prior to the commencement of arbitration or litigation, there is uncertainty as to the enforceability of "ADR" clauses such as this.⁴⁶ Further, it is unclear, when the appropriate stage is reached, whether clause 13 constitutes an "Arbitration Agreement" within the *Uniform Commercial Arbitration Acts*, due to the effect of clause 13.03.⁴⁷

In JCC it is important for proprietors to appreciate that they will not have a right to arbitrate, in relation to extensions of time, where the Architect has not actually made "a decision" but has allowed the contractor to obtain a deemed extension by default (under clause 9.04).⁴⁸

Finally, there is no general requirement in JCC that disputes be raised or dealt with within any set period of time after they arise.

(xiii) Nominated Sub-contractors

JCC provides no alternative to the nominated sub-contractor system (such as joint selection of sub-contractors). The Contracts expressly provide that the builder is responsible for all sub-contractors whether nominated or domestic, and further, that the builder is responsible for provisional contracts entered into by the proprietor prior to entry into the head contract. The builder is required to take over and be responsible for these contractors and suppliers who are deemed to be either nominated sub-contractors or nominated suppliers.

JCC allocates the risk of nominated sub-contractor default only in the event of bankruptcy or repudiation. It does not deal with the issue of

reasonable termination of a nominated sub-contractor by the builder, nor abandonment by a nominated sub-contractor. Further, it does not deal with the problem of nominated supplier default.

The risk of nominated sub-contractor insolvency or repudiation is allocated to the proprietor. The architect is required to either re-nominate or issue to the builder an instruction to omit the remainder of the nominated sub-contract work or to itself execute the remainder of the nominated sub-contract work. The associated costs are borne by the proprietor.

The time risk associated with nominated sub-contractor insolvency or repudiation is not dealt with in JCC, nor is the risk of defective work of the outgoing nominated sub-contractor. Both these risks are, and have been, open to considerable dispute.⁴⁹

(xiv) Extensions of time

JCC does not specify the criteria to be taken into account by the architect in determining extensions of time. The parties are left to assume that the architect is to have regard to the circumstances in which the builder is to claim extensions in making the decision as to "what, if any, extension of time" is to be granted.

JCC does not provide for any interim granting of extensions of time and does not detail what particulars are to be provided by the builder upon an application for an extension of time.

(xv) Construction Methods and Sequencing

JCC provides that the contractor is responsible for construction methods and sequencing. The proprietor however has no right to be informed of the contractor's intentions with progress of the works and has no means of monitoring the progress of the works.

(xvi) Determination for Substantial Loss, Destruction or Damage

Clause 12.08 provides that should any substantial loss, destruction or damage affecting the works occur, either party can determine the agreement. Owners should be aware that a builder may be permitted to determine the contract even if the loss, destruction or damage was caused by the builder. Although the clause empowers the other party to refer the question of whether the determination would be just and equitable to arbitration, the question to be dealt with in the arbitration process is "*whether such determination would be just and equitable having regard to the extent of such loss, destruction or damage and to the effect thereof of the further performance of the agreement.*" Accordingly, the arbitrator is not permitted to consider the cause of the loss, destruction or damage.

ANNEXURE C: AS4300-1995

AS2124 and JCC are tailored only to traditional project delivery systems⁵⁰ and are therefore not suitable for a design and construct ("D&C") project delivery system in which the contractor assumes both design and construct obligations. Standards Australia has acknowledged this deficiency by publishing AS4300-1995, in an attempt to provide general conditions of contract for D&C. That document has been based on AS2124-1992 and, like its predecessor, is the product of a consultative process involving various interest groups within the industry.

Close analysis of AS4300 reveals that it contains deficiencies of which both owners and contractors should be aware. Those deficiencies are primarily of two sorts:

- those inherited from AS2124; and
- those which arise out of a failure to completely address the particular risks which arise in the context of D&C project delivery systems.

The following analysis does not pretend to deal exhaustively with all of the issues arising out of AS4300. Parties intending to use this document should not do so without, firstly, having the risks associated with the document identified and, secondly, amending those matters which are of concern to them.

Inherited Deficiencies

(i) Cost Management

D&C contracts are frequently let on a lump sum or guaranteed maximum price basis, in an attempt by the owner to obtain cost effective design. However, AS4300 does not provide an adequate framework which gives the owner the capacity to keep the cost of the project within budget, perpetuating several of the uncertainties which exist in AS2124 including the following:

(a) Delay Costs

The costs of delay remain unpredictable for both owners and contractors. As with AS2124, clause 36 refers to an "extra cost" formulation for compensation, which requires the contractor to prove its actual delay costs. This places an unnecessary burden on it and also deprives the owner of the capacity to predict out-turn cost. Further, because of the wording of clause 35.5, the contractor is entitled to compensation if it is delayed in reaching a date for completion set by it which is earlier than the contractually stipulated date.

(b) Variations

AS4300 does not require variations to be valued before work is commenced. Again, this reduces the predicability of costs for the parties, as well as providing a fertile source of disputes.

(c) Notification Procedures

AS4300 inherits AS2124's lack of a meaningful notification procedure. This reduces the predicability of cost outcomes for both parties. Clause 46.1 provides that the procedure relates to "any claim in connection with the Contract or the subject matter thereof". Claims which are required to be communicated under another provision of the contract (such as payment claims) are specifically excluded. Also, the extent to which extra contractual claims such as in tort for negligence, under statute or a quantum meruit are included is not clear.

Curiously, rather than barring any claim which is not notified within the prescribed time (as a form of sanction), clause 46.2 expressly states that failure to give notice of a claim will not be grounds for invalidating it but will entitle the innocent party to damages for breach of contract. This deprives the notification procedure of its "teeth", as in most cases the damages to be awarded would be likely to be nominal⁵¹, and therefore unlikely to be a sufficient incentive to ensure strict compliance.

(ii) Security and Retention

As with AS2124, an owner will not have access to security or retention until after any dispute as to its entitlement to call upon the security or use the retention has been determined. Such restrictions on the use of security are unacceptable to many owners. They prevent an owner from obtaining cashflow to rectify defective work (which the contractor refuses to rectify) or to complete the works once the contractor's engagement has been terminated for default.

(iii) Collateral Contracts

As with AS2124, AS4300 does not enable the owner to enter into collateral contracts with subcontractors, so that in the event of default the owner can take action against them directly. Such a direct contractual link is invaluable, especially if the head contractor becomes insolvent.

(iv) Role of Superintendent

The real difficulties with the role of the superintendent under clause 23 of AS2124 have been inherited by AS4300 "lock, stock and barrel". The superintendent is still required to act honestly and fairly in the exercise of all of its functions (both certifying and agency) under the contract, and the owner is still required to warrant that the superintendent will arrive at a reasonable measure of work or extension of time.

(v) Key Personnel

As with AS2124, AS4300 does not contain a key personnel provision. This may be particularly crucial in the context of a D&C contract, in which it is important to the owner for the contractor to retain particular personnel on the project.

(vi) Acceleration

AS4300 does not empower the owner to order the contractor to accelerate to overcome the effects of any delays, notwithstanding that timely completion may be crucial to the owner and that for commercial reasons the owner may be prepared to compensate the contractor for this.

(vii) Latent Conditions

Clause 12.1 of AS4300 retains the subjective test for latent conditions which favours inexperienced contractors. Further, clause 12.4 still enables the contractor to be compensated for the extra costs arising out of a latent condition up to 28 days before notice of that condition is given to the owner. This is notwithstanding that an owner should be entitled to notice of such conditions as soon as possible, so that it can put in place measures to mitigate any loss arising out of them. In any event, the parties should consider whether a latent condition clause is always appropriate in the context of a D&C contract. Because a D&C contractor has greater control over the project as a whole, if it has had a sufficient opportunity to do so, then the contractor may be able to "design around" latent site conditions.

(viii) Variations due to defective work

If a variation is directed by the superintendent under clause 30.4 to overcome defective work, the contractor will be entitled to an extension of time. This is unless the variation is directed for the convenience of the contractor under clause 40.4.

(ix) Neutral delays

AS4300 still gives the contractor a wide entitlement to extensions of time for neutral delays including those "beyond the reasonable control of the contractor", and is therefore likely to give rise to disputes.

(x) Dispute Resolution

Unlike AS2124, clause 47.2 of AS4300 does not provide a binding arbitration agreement. However, the structure of the provision fails to encourage the parties to employ "alternative" methods of dispute resolution (such as mediation) before submitting their disputes to arbitration. At the very least, the clause could make a reference to expert adjudication or mediation a condition precedent to arbitration.

New Problems Specifically Relating to D&C Contracts

The main legal and commercial factors which distinguish a D&C from a traditional form of contract are:

- the calculation of price and, in particular, whether the contractor's entitlement is limited to a fixed price or lump sum;
- the role of consultants employed by the owner in monitoring both design and construction;
- the contractor's design responsibility including its duty to ensure that the works are fit for their purpose; and
- ascertaining the scope of the works for the purposes of determining variations.

Almost every clause in a D&C contract needs to be prepared with these, and other, differences in mind. For that reason, virtually all standard forms have proved unsuitable for application to D&C projects without heavy amendment. The legal difficulties which arise when using a standard form for a D&C project, without sufficiently careful amendment, are manifest.⁵²

AS4300 has modified many of the provisions of AS2124 in an attempt to ensure that the document is now suitable for D&C projects. Although many of the necessary amendments have been made, there are still several issues which need to be addressed in order to ensure that the document is more fully tailored to such a delivery system.

(i) Consultants

Contractors normally engage consultants to undertake the design work which it is required to perform under the contract. Although the owner will frequently engage its own consultants to check that the work is being carried out in accordance with the contract, it is in the owner's interests to ensure that it has some input into the consultants engaged by the contractor.

The procedure for subcontracting in clause 9.2 applies to consultants (because of the definition of "subcontractor" in clause 2). That procedure requires the contractor to obtain the superintendent's approval to the subcontracting of any work which is set out in Annexure Part A.

Clause 9.2 sets out the conditions which can be imposed upon the superintendent's approval of a subcontractor. Those conditions do not require the contractor to obtain for the owner a direct contractual right of recourse against a consultant. However, because contractors will often pass on their design and performance risks to specialist consultants (especially in relation to hydraulics, airconditioning and machinery and equipment), they should be required to obtain collateral contracts from the subcontractors which provide the owner with a direct right of recourse.

(ii) Design Obligations

The design warranties set out in clause 4.1 of AS4300 are critical and need to be closely reviewed. This is because of the total reliance of the owner on the contractor to design and construct the project to suit the owner's purpose.

The contractor's warranty in clause 4.1(a) that it will exercise due skill, care and diligence would seem redundant in the context of the fitness for purpose obligations which are set out in subsequent paragraphs, and there is no acknowledgement that the contractor is aware that the owner is relying on the contractor's advice, skill and judgment, which is typically the case in a D&C project.

Clause 4.1(c) requires the contractor to warrant that the "Preliminary Design" which is included in the Principal's Project Requirements ("PPR") is suitable for the purpose stated in the PPR. The contractor should however warrant that the whole PPR (and not just the Preliminary Design) is fit for its purpose. Otherwise, any identifiable inadequacies in the PPR may give the contractor a chance to under-design in order to effect costs savings.

Clause 4.2(e)(i) requires the contractor to complete the work in accordance with the "Design Documents" so that they will be fit for their stated purpose. It would be preferable to separate the two obligations contained in that clause so that if the contractor completes the work in accordance with the Design Documents but the work is nevertheless not fit for its stated purpose, the contractor has discharged its obligation to complete the work in accordance with the Design Documents.

(iii) Review of Design

In a D&C contract it is important for the owner to have the power to monitor the design and the quality of the work being done. However, this review needs to be done in a way which does not result in the risk originally assumed by the contractor being transferred back to the owner.⁵³

AS4300 clause 8.4 requires the contractor to supply the superintendent with the documents and information "required by the Superintendent and as required by the Contract". Owners must be aware that clause 8.4 is not of itself effective to enable the owner to monitor the project design. If the owner wants to retain the right to monitor design, then further provisions will need to be inserted explicitly (whether in the PPR or elsewhere) stating that the contractor has to submit documents to the superintendent for approval. A further deficiency in clause 8 is that it does not make it clear that the contractor's obligations are not relieved by the superintendent's review.

(iv) Payment

Under D&C arrangements, payment of the agreed lump sum price is often made by way of fixed instalments by reference to the completion of pre-agreed stages of construction or milestones. Because the contractor is responsible for design, the owner's consultants will not really be in a position to make accurate estimates of how much work has been completed at the time of each payment claim. AS4300 goes some way towards recognising this by providing for payment stages. However, it does not do this adequately for the following reasons.

Firstly, clause 42.1 does not expressly provide for certification by the superintendent that the relevant stage has been reached. Rather, the superintendent must "assess" the claim and issue a payment certificate. This ignores the very real possibility that, despite the submission of a claim, the stage for payment may not have been reached. There is also no provision for fixing the amount of the payment to be made on the completion of each stage, even though it is common to specify fixed instalments in this way, rather than depend upon estimates by the superintendent of the value of the work carried out as at that stage.

Finally, once a stage for payment has been reached, the owner is required to pay the contractor either within 14 days of the superintendent's certificate or 28 days of the payment claim. Accordingly, if the contractor has programmed the earlier completion of a particular stage to suit its own requirements, then the owner may be required to make a payment earlier than it would otherwise have been prepared to (based on the contractually stipulated Date for Practical Completion). This may affect the owner's cashflow and, indeed, may not even be possible if the owner's financial arrangements involve fixed drawdown dates.

(v) Provisional Sums

Because design is to be completed by the contractor under a D&C strategy, it is uncommon (and perhaps superfluous) to superimpose a mechanism for provisional sums in D&C contracts. Notwithstanding, clause 11 of AS4300 retains the concept of provisional sums as used in AS2124. However, the use of nominated subcontractors to carry out the provisional sum work has been done away with by deleting clause 11(c). Accordingly, if the contractor carries out an item of provisional sum work itself, then it will be paid for the work as a variation valued under clause 40.5. If a subcontractor carries out the work, then the contractor will be paid the amount payable to the subcontractor (disregarding any damages payable) plus a percentage for profit and attendance.

This would seem to negate any justification for including a provisional sum procedure in the contract. The work to be carried out in this way could easily be ordered as a variation instead.

(vi) Time Obligations

After a D&C contract has been let, the contractor should commence its design obligations immediately and then commence its construction obligations by a later date specified in the contract. However, clause 35.1 of AS4300 simply requires the contractor to "promptly commence the work under the Contract". This does not sufficiently take into account the dual nature of the obligations assumed by a D&C contractor.

To more fully ensure the timely completion of the contractor's obligations, the contractor should be required to provide a document program (as part of its greater programming obligations) clearly setting out the way in which it will provide its design to the superintendent. Clause 33 of AS4300, like AS2124, does not actually require the contractor to submit a construction program. This could prove to be critical given the overlap of design and contract obligations, especially in the context of a "fast-track" project.

(vii) Variations

Under a D&C delivery system, where the works are not fully designed and therefore the contractor's obligations can be less clear cut, the problems associated with variations are magnified. In particular, the issue arises in the context of the review of design documents by the owner.

Apart from ensuring that the technical documents are drafted in a way which will minimise such variations, the general conditions of contract should require the contractor to give notice of any direction by the superintendent which it considers to be a variation. This should be required either within a specified period of the direction being given or, indeed, before the work the subject of the direction is carried out. Clause 40 of AS4300 does not provide for such a notice and neither is this issue adequately covered by the notification of claims provision in clause 46. Accordingly, the contractor can "bank" variation claims until the end of the project, resulting in reduced predicability of costs for both parties.

Owners and contractors (as well as other participants in the construction industry) who are contemplating the use of AS4300 should remember that because of the consensus process by which it was conceived, many of the quirks of AS2124 remain. They should therefore be cautious as to the extent to which AS4300 is purporting to be automatically suitable for all D&C projects. As a result, there is little

doubt that AS4300 will in practice become heavily amended as parties attempt to "clean up" the risk allocation of that document.

As time progresses it will be interesting to note the extent to which the publication of AS4300 prompts the promulgation of other general conditions of contract for D&C in an attempt to cure the lack of an adequate industry-wide form (other than the Department of Defence design and construct), and the extent to which the other contracts to be in the suite of which AS2124 and AS4300 (especially management and trade) will suffer from similar defects. □

