Alternative forms of building contract, and implications for the practice of architecture and influences upon the Australian building industry.

Thesis Submission for the Degree of Master of Architecture

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This thesis considers alternative forms of building contract currently in use in the Australian building industry today. It initially provides information on the history of contract law, legal terminology and legal issues. In addition, it investigates issues relating to the historical use of standard forms of contract, their content, structure, intent and adaptation. A review of the most commonly used forms of contract, applicable to medium to large scale projects, is provided as a basis of understanding to subsequent investigation and discussion of the underlying reasons for the development of non-standard forms of contract.

There have been many changes within the Australian building industry over the last two decades. It is these changes which have been primarily responsible for the subsequent divergence from traditional methods of project delivery and standard forms of contract. The thesis examines the most significant influences attributable to these changes and discusses various issues including political, economic, industrial and social factors. The consequences of these changes are considered in relation to their effect upon building industry participants, including architects, the building process and systems of project delivery.

A variety of alternative methods of project delivery are discussed, together with an investigation of the resultant forms of building contract used. The thesis investigates the nature of such contracts, with particular emphasis on novation contracts. Case Studies are also examined with reference being made to the actual contracts employed on specific projects, and the development of new standard forms of contract. The emergence of other developments such as quality assurance programmes are also considered, providing an insight into their potential and actual effect upon project delivery and their incorporation into the new forms of contract. The final chapter is a summary in part, and it proposes future developments within the Australian building industry.
DECLARATION

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference had been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for photocopying and loan.

SIGNED:...  
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Chapter 1: INTRODUCTION

The Australian building industry has a complex and inter-related structure. It embodies a range of activities associated with issues such as design, documentation, construction, finance, legalities, management, communication and negotiation. Each activity involves a variety of participants and, in many instances, functions concurrently with or overlapping other activities.

This thesis investigates alternative forms of building contract in use today in the Australian building industry. In so doing, it considers issues relating to the participants in the building process and project delivery systems.

An inherent part of the building process is the selection and implementation of forms of contract and project delivery systems. Consideration of these aspects cannot be undertaken without also considering the aforementioned factors.

The building industry and the building process have been influenced by a number of factors over the last two decades. These can be broadly categorised into political, economic, industrial, social and professional issues. The nature, history, outcomes and consequences of these issues are explored in this thesis and are discussed in relation to a series of research questions posed earlier.

1.1 THESIS/RESEARCH QUESTIONS

The research undertaken poses answers to a number of questions. Throughout the body of the thesis, arguments are put forward with regard to the following questions:
(a) What purpose do contracts serve in the building process?
(b) How do standard forms of contract differ from alternative forms?
(c) What changes have occurred in the Australian building industry over the last two decades?
(d) Why is there a need to consider alternative forms of contract?
(e) How has the Australian building industry responded to those changes?
(f) Why did a need, perceived or real, for change arise?
(g) In relation to Item (f) above, what influences are attributable to this change?
(h) Are the changes irrevocable, and should they be?
(i) What are the outcomes of the changes?
(j) What are the consequences of the outcomes?
(k) In what way have forms of building contract changed?

Although this thesis is concerned primarily with the effects of such alternative forms of building contract upon the architectural profession, it is not exclusively the case. In considering the influence and changes which have occurred, a broader view of the implications for the Australian building industry. This direction is taken since it is considered inappropriate, in the context of this thesis, to consider only one discipline or group of participants in isolation, because any given group cannot function effectively on an individual or exclusive basis. The implementation and execution of the building process is based on a collective, inter-dependent structure of its participants. This point of view is the supposition which underlies this thesis.

1.2 DEFINITION OF KEY TERMS

In order that an understanding of the principal issues discussed in this thesis may be gained, the following definition of key terms is provided:
(a) STANDARD CONTRACT - a building contract which has been developed over a period of years. It is in common use throughout the Australian building industry and its application is relevant to project size and/or typology. It has not been drafted for use on a specific project. Such contracts are generally reviewed and modified periodically in accordance with market demands. Examples include the JCC, NPWC 3 and AS 2124 forms.

(b) ALTERNATIVE CONTRACT - a building contract which has been developed for a specific project or non-traditional system of project delivery. It generally encompasses and makes provision for issues not provided for in standard contracts, and often includes clauses relevant to the most current trends within the building industry.

(c) BUILDING INDUSTRY - an industry, collective in nature and varied in origins associated with the construction of, primarily, buildings and other structures. It includes a variety of participants and activities encompassing the areas of design, construction, sub-contracting, manufacture and supply, and industrial relations in the construction context.

(d) BUILDING PROCESS - the process of building. It includes a range of activities associated with production and performance, and is based on a staged procedure of execution. It encompasses the production of design and other documentation, construction (including the sub-contracting and supply processes) and commissioning. Each of these stages have generally recognised systems of communication, interaction, negotiation, and obligations and responsibilities applicable to the relevant participants.

(e) PARTICIPANTS - the individuals, groups, firms and organisations involved in the building process and the building industry. They include design professionals (architects, engineers and so on), proprietors (also known as principals, owners,
clients, developers), builders, sub-contractors, suppliers, financiers, legal professionals (lawyers) and para-professionals (project managers, construction managers, building designers).

(f) PROJECT DELIVERY - the method or system by which a project is delivered. It includes aspects of design, documentation, construction and form of contract, together with the administrative and managerial means of providing or implementing same. Its time frame may be all-encompassing covering matters from inception to commissioning. Alternatively, it may only refer to the construction phase of a project. It can utilise any one of a number of systems and associated contracts including traditional, project management, construction management, design/construct, fast track, turnkey, novation and so on.

(g) NOVATION - Agreed substitution of a new obligation for an old one. (Refer Chapter 8 of this thesis).

(h) PROFESSIONALS - industry participants, including architects and engineers, who are effectively self-regulated. Also referred to as 'consultants'.

(i) PARA-PROFESSIONALS - industry participants including builders, project managers, construction managers and building designers.

It should be noted that definitions of other specific and/or miscellaneous terms are provided through the body of this thesis as appropriate.

1.3 THESIS STRUCTURE

The organisation of this thesis is based on an evolutionary structure. Chapter 4 is essentially
background information providing historical information regarding the development of contract law, common legal terminology applicable to contracts and legal issues relevant to them. This chapter provides the necessary information required to fully understand Chapter 5. Chapter 5 subsequently covers aspects associated with the most frequently used standard forms of building contract in the Australian building industry. This chapter's inclusion is important since it, in turn, provides the basis of understanding for future chapters associated with alternative forms of contract. It is considered inappropriate to discuss alternative forms of contract, which is of primary concern in this thesis, if the forms to which they are considered alternative, are ignored.

Chapter 6 which investigates some of the most significant influences upon the building industry and the resultant trends and outcomes of them. The purpose of this chapter is to identify some of the reasons why there have been trends away from standard forms of contract and traditional systems of project delivery, towards alternative forms and systems.

Chapter 7 investigates issues associated with various project delivery systems. This particular chapter is included since it is considered important to have an understanding of the project delivery systems themselves. These systems have originated in consequence to the trends and changes within the building industry as discussed. The information is dealt with in a general, yet comprehensive way and provides the basis for consideration of a specific system in the following chapter.

Chapter 8 investigates on one of the more significant methods of project delivery and forms of contract currently in use in Australia today, namely novation. Novation incorporates aspects applicable to traditional and non-traditional systems and accommodates current issues relevant to the trends and changes within the building industry. Therefore, it represents an ideal model for study. Five Case Studies are also provided in this chapter. Four of these are project specific, while the fifth is based on a generally applicable form of contract. All the project Case Studies incorporate the novation system.
The issue of quality assurance is discussed in a number of chapters, but in Chapter 9 in particular. While the concept of quality assurance is not original, its current format and approach, to some extent, is different. Notable developments in this area have occurred over recent years and these are having a marked influence upon contracting, project delivery systems and the Australian building industry. Quality assurance is particularly relevant to novation contracts. It is included so as to provide a general understanding of the nature of the system and to identify its relevance to alternative forms of contract.

Chapters 4 to 9 inclusive put forward evidence and theories to reinforce proposed arguments. Chapter 10 provides the conclusion and discusses likely future developments in the Australian building industry, and systems of project delivery and contracting.

1.4 PURPOSE OF THE STUDY

There are several reasons for undertaking this research and these are essentially personal, academic and professional. With respect to the personal reason, the author has had (and still has) a significant and growing interest in matters associated with building contracts, project delivery systems, the building process and the Australian building industry generally. A genuine concern for the future of the design professions in Australia, in particular that of architecture, also exists. The author also believes there is a need for all participants within the building industry to function and operate on an interactive and co-operative basis, as opposed to an isolated and confrontational one. In addition, this study fulfils the strong interests of and provided for the application of the skills and experience of the author.

In order to consider the benefits of this study to the profession, industry and academia, issues associated with the research questions posed need first be discussed.

Change is an inherent part of our developing society, and the Australian building industry
not exempt from change. The building industry is notoriously conservative and often resistant to change, yet it still occurs and must eventually be accommodated. The changes affecting the Australian building industry have been most dramatic over the last two decades, and some of the reasons for this are discussed in Chapter 6 of the thesis. There is a need to identify, assess and evaluate them in terms of their advantages and disadvantages for the efficient working of the industry.

Previous research in this field has, on the one hand, largely concentrated on matters associated with standard forms of contract and dispute resolution while, on the other hand, the broader industry aspects have encompassed individual issues such as project management, quality assurance, and unethical, illegal and corrupt practices. Little attention has been paid to the interaction and correlation of each of these issues. Likewise, overall effects upon the various sectors of the building industry have largely not been considered. This thesis attempts to bridge some of the gaps which exist in current sources of information, highlighting the interactive nature of the building process and trends towards alternative forms of building contract and project delivery.

The benefits of this area of study and approach for the architectural profession, the building industry and academia are, therefore, several. In all cases, it is anticipated that this thesis will provide a detailed and comprehensive study of the issues affecting the Australian building industry today together with an investigation of possible future developments and outcomes. The approach to research and topic material is deliberately wide ranging, although particular emphasis is placed upon alternative forms of building contract. Building contracts have often been used with little or no understanding of the legal and practical implications. This has led to disputes and claims arising - developments which need not necessarily occur. This study provides an understanding of alternative forms of contract, the reasons for their existence and the basis of their development. It is intended that the information in this thesis be utilised by a variety of groups and individuals, whether professional, academic or from other sectors of the building industry or the wider community.
With respect to the professions, in particular the architectural profession, this will provide the basis for an understanding of alternative forms of contract and, therefore, help allay any fears, apprehensions or misgivings concerning their nature, structure and the consequences of their use.

In the academic sphere, this thesis could provide a comprehensive teaching tool and, at the very least, reference source for academic staff and students. It would be most appropriate for professional tertiary-level courses, however, with modification may be adaptable for other educational programmes.

In regard to the building industry generally, this thesis could provide a single reference source for any parties interested in gaining an insight into and understanding of alternative forms of building contract applicable to the current times and modes of practice. The benefits would be variable and depend upon the nature and needs of the user.

In relation to the general public, this thesis could provide a comprehensive reference for anyone interested in a variety of issues. These issues may include the history of contracts, legal terminology, standard forms of building contract, trends within the Australian building industry, project delivery systems, novation and quality assurance.

This thesis aims to improve the level of knowledge applicable to the building process, the Australian building industry, building contracts and in particular alternative forms of contract. It is considered a significant contribution to the building and construction industries in Australia.
Chapter 2: METHODOLOGY

The methodology involved initially defining the topic/research boundaries, and included identifying the relevant participants in the building process, the current range of project delivery systems used in Australia, and a literature review of previous work in this area. A summary of the history of contract law, legal terms and legal issues, and standard forms of building contract has been provided as a basis for understanding the alternative contract forms and delivery systems.

A number of interviews with building industry participants were held to elucidate information pertinent to the use and relevance of alternative forms of contract and a number of Case Studies.

2.1 RESEARCH BOUNDARIES

It was considered that the most significant changes applicable to the current status of the use of alternative forms of building contract and, therefore, the primary topic of this thesis, have occurred as a result of various influences over the last twenty year period. Consequently, aside from issues relating to the history of contract law, the time frame of reference has been limited to the period 1970 until the present, 1992.

As mentioned previously, this thesis has limited its discussion to investigation of contracts (standard or alternative) to those suitable for use on medium to large scale projects. This has been done for a number of reasons. The first is that projects of this scale involve the greatest and most diverse range of participants. Therefore, research undertaken must ensure that it is indeed applicable to the architectural profession and the building industry.
collectively. The second reason is that medium to large scale projects are more significantly affected by the influences investigated, namely political, social, industrial and professional factors, and these have been considered and discussed throughout the body of the thesis in relation to the time frame. In some instances changes can be principally attributed to one of these factors or trends, however, in most cases changes have occurred as a result of a combination of factors.

The range of participants is deliberately varied. This is so as to provide a comprehensive investigation of the effects of changes to the Australian building industry, methods of project delivery and forms of contract. It is believed inappropriate by the author, to consider the industry as a whole without reviewing the influences upon and effects of the complete range of participants, since any one group of participants does not function in isolation. For this reason, the following participants were considered:

(a) Architects (and other design professionals);
(b) Proprietors;
(c) Builders;
(d) Sub-contractors;
(e) Other para-professionals; and
(f) Legal professionals.

Chapter 7 of the thesis discusses the various systems of project delivery. Its inclusion is considered necessary since it is inappropriate, in the context of this thesis, to consider forms of building contract in isolation from the building process, commonly referred to as the delivery system. It may be argued that the contract is a consequence of the process and, in the case of an alternative form such as novation, this is indeed the case. Contracts can either be adopted, adapted or created for use on any given project and, in order to understand fully the objectives, intention and contents of the document it must be considered in relation to the process to which it is being applied.
The systems investigated represent the most common methods of project delivery in use in Australia today. They include the following:

(a) Traditional;
(b) Project Management;
(c) Design/Construct;
(d) Construction Management;
(e) Fast Track;
(f) Turnkey;
(g) Novation; and
(h) Various systems used by the Department of Defence (which are modified versions of several above).

The above systems have been considered since it is these systems on which the alternative forms of contract have often been based. Particular emphasis is placed on novation contracts and the novation system in Chapter 8 of this thesis. Novation is based on a combination of several of the above systems and, therefore, in order to understand novation, an understanding of the original system must first be gained. It is considered appropriate that novation be considered in detail over some other systems. There are three primary reasons for this including that same utilises traditional and non-traditional methods of delivery. Secondly, it is considered, by participants in the building industry, to be at the forefront of alternative methods of delivery and contracting in use today. Thirdly, it collectively incorporates, utilises, represents and promotes some of the most dramatic changes which have occurred within the Australian building industry over the last two decades. This includes the changing roles of participants, changes in social attitudes, alternative methods of delivery, trends within the industrial relations area and the development of other industry factors such as quality assurance. In essence, consideration of this one form of delivery and contracting enables a variety of issues to be investigated and propositions put forward.
Mention has been made of the relevance of this research to the Australian building industry. This thesis has been restricted in context to the Australian situation. A few exceptions do exist, but these are in relation to historical issues including the history of contract law and a system of delivery similar to novation, namely the British Property Federation System for Property Design and Construction. All other references made, and sources of information collected and utilised, are relevant to the Australian condition.

2.2 LITERATURE REVIEW

Sources of information were also researched by way of reviewing various forms of literature (refer also Chapter 3 and Bibliography). Such literature included the following:

(a) Published texts;
(b) Published articles in Australian building industry magazines, periodicals and reports;
(c) Conference notes and papers (as supplied and in some cases presented by interviewees);
(d) R.A.I.A. Practice publications;
(e) Printed copies of forms of standard building contract; and
(f) Printed copies of forms of non-standard building contract, consultancy agreements and deeds of novation (relevant to Case Studies).

The Literature Review incorporated interpretation and analysis of findings and results, as well as consideration of theories, opinions and points of view.
2.3 BACKGROUND INFORMATION

In order for a complete and comprehensive understanding of the thesis topic to be gained, the author considered it necessary to provide some degree of so-called 'background information'. It is for this reason that the forth and fifth chapters exist. Chapter 4 provides information about the history of contract law and the basis on which Australian contract law was founded. It also explores some of the legal terminology relevant to contract law which, it is intended, will provide the basis of understanding for terminology used and referred to in succeeding chapters. Likewise, legal issues associated with contract law are also discussed. Chapter 5 includes consideration of the standard forms of building contract currently in use in Australia today, and is limited to the most frequently used contracts. This chapter's inclusion is considered important for several reasons. The first relates to the fact that the advantages or disadvantages of alternative forms of contract cannot be appropriately investigated if issues relating to standard contracts are omitted. It is also important to distinguish between the various forms of contract and identify the differences that exist. Detailed investigation of the nominated contracts is restricted to three forms. The reason for this being that these three forms are the most frequently used contracts for medium to large scale projects to which this thesis refers. In accordance with discussion in latter chapters of this thesis, it can be found that the development of alternative forms of building contract has, in some cases, been based on either of these three standard forms. Therefore, specific consideration has been afforded them in Chapter 5.

2.4 SOURCES OF INFORMATION

The collection of information incorporated several methods and sources including structured interviews, review of available literature, documentation and records, and the author's personal professional training and experience.
2.4.1 Literature Review

Refer Item 2.2, this chapter.

2.4.2 Industry Sources

A total of twenty six formal interviews were undertaken. The interviewees deliberately encompassed a broad spectrum of building industry participants. They included the following:

(a) Architects;
(b) Engineers (structural and services);
(c) Builders;
(d) Project managers (private and government);
(e) Proprietors;
(f) Legal practitioners;
(g) Project development advisers;
(h) Representative body for architects (R.A.I.A.); and
(i) Representative body for sub-contractors (BISCOA);

This thesis concerns itself, in part, with the implications of alternative forms of building contract for the architectural profession. The influence of such contracts and alternative systems of project delivery upon the Australian building industry generally are also considered. It is for this reason, therefore, that the wide range of participants were consulted. Concentration of investigation and research to one group of participants alone would not be appropriate nor justifiable in this instance. The validity of the research lies in its diversity.

Likewise, the relevant nature and extent of experience of said interviewees was wide ranging. Interviewees were selected on the basis of their experience in various sectors of the
industry and, in respect of the Case Studies (detailed in Chapter 8), in relation to their involvement with the given projects.

A structured series of questions were formulated for each interview. The questions were generally consistent in content, with minor adjustments depending upon the interviewee's role and place within the industry. Likewise, interviewees with particular Case Study experience were asked other questions relevant to that Study. Due to the number and variable nature of the interviewees, subsequent questions asked and method of recording answers, pro-forma questionnaires have not been included in this thesis. However, the range of topics investigated included:

(a) Personal background information relevant to the interviewee;
(b) Knowledge and experience of standard forms of building contract;
(c) Advantages and disadvantages of (b) above;
(d) Knowledge and experience of non-standard (or alternative) forms of building contract;
(e) Advantages and disadvantages of (d) above;
(f) Knowledge and experience of alternative systems of project delivery, in particular, novation;
(g) Professional liability;
(h) Quality assurance;
(i) Anticipated future trends within the Australian building industry;
(j) Case Study related questions including project history and background, list of primary participants, programming, construction costs, the success or otherwise of specific aspects of the project's delivery in part and in whole, roles and responsibilities of participants, the form of contract used; and
(k) Other persons suggested to be contacted.

In all but two instances, interview results were recorded by the taking of hand-written
notes and tape recording. Two interviewees permitted only the taking of hand-written notes.

A total of five Case Studies are considered in Chapter 8 of this thesis. Of these, Case Studies 1 to 4 inclusive relate to specific projects while Case Study 5 relates to a particular form of contract. The project Case Studies were chosen for a variety of reasons, but an underlying common factor is that they are all novation contracts. The relevance of novation has been discussed previously.

Case Studies 1 to 4 were chosen on the basis of their similarity and diversity. Their similarity lies in the fact that they are all novation contracts. Their diversity encompasses a variety of aspects including participant involvement, location, project scale and project type. This diversity is considered an important factor since it illustrates the applicability of the novation system to various projects, thereby providing justification for its consideration.

Case Studies 2 to 4 are located in Melbourne, however, this is still considered appropriate since the majority of medium to large novation projects executed in Australia in recent years have been located there. Case Studies 1 to 3 had public proprietors, while Case Study 4 was private in nature. Case Studies 1 to 4 were of multi-million dollar construction value, and the construction costs nominated are in Australian dollars. All of the Case Studies incorporate the use of consultants.

The participants interviewed for the purposes of researching the Case Studies 1 to 4 were selected on the basis of their involvement with the given project. An attempt has been made to obtain a wide and varied information and opinion base. Attempts were also made to expand this selection, however, some of the participants contacted did not respond to the author’s written communication. Such details have been qualified in each of the Case Studies.

Case Study 5 differs from the others in that it is not project-specific. It is referred to as a
'standard' form of novation contract. The principal difference is that it is intended for use on any project utilising the novation system of delivery and, therefore, has been drafted in a more general manner. The other Case Study contracts have been drafted specifically for use on those respective projects with no deliberate intention that they be used repeatedly. It is considered important that distinctions between project-specific and general contracts be entertained, thereby providing a comprehensive data base and analysis.

It is important to note that the primary documents applicable to each Case Study, namely the consultant agreement, the deed of novation and the building contract are discussed and analysed wherever possible. In some instances, copies of the relevant documents were not made available to the author, generally for reasons of confidentiality, and this is nominated accordingly.

Another major source of information collection relates to the personal professional experience of the author. The writer is a qualified registered architect (in the State of South Australia) and a partner in an architectural firm in Adelaide. Practical experience extends over ten years and encompasses project involvement (in a variety of areas) at a State, national and international level. Projects undertaken have been commercial, industrial, residential, institutional and recreational in nature, ranging in construction value from minor to multi-million dollar works. The author also holds a current academic appointment with the Department of Architecture at The University of Adelaide. Academic responsibilities include lecturing in and course development/co-ordination of the Department's architectural management and practice component, which is run in conjunction with the School of the Built Environment at the University of South Australia. Other teaching duties encompass the areas of construction and design. The author is also a member of the Royal Australian Institute of Architects (R.A.I.A.) and a past member of the R.A.I.A. (SA Chapter) Council and Membership/Information Committee, as well as a current member of various other professional and community organisations.
The practical experience gained by the author encompasses the usual duties performed by a professional architect, with particular emphasis on contractual, administrative and management matters. It is a combination of this experience and a developed sense of interpersonal relationships which has provided the author with a comprehensive and diverse range of skills. These acquired skills and experience which have been drawn upon for the purposes of data collection in relation to the function and operation of the Australian building industry generally, and the architectural profession specifically.
Chapter 3: LITERATURE REVIEW

The Literature Review for this thesis encompassed a variety of documents. Such literature included the following.

3.1 PUBLISHED TEXTS

A number of published texts (or books) were consulted and elements utilised for the purposes of preparing this thesis. A list of actual documents referred to can be obtained by reference to the Bibliography. The majority of texts are concerned with contracts and contract law. Some of these such as those by Graw (1990), Greig and Davis (1987), and Hocker, Dufty and Heffey (1990), for example, are general in nature. They provide information which is usually non-specific in its reference. Their use is, therefore, limited to gaining an understanding of contract law. They do not assist the reader in gaining a selected insight into building contracts or the particular issues relating to them.

Others, including that by Dorter and Sharkey (1990), are more specific in content and relate directly to Australian building contracts. This latter book is of particular importance since it explores the issues associated with standard forms of building contract. Dorter and Sharkey (1990) investigate and explain the advantages and disadvantages of various forms of contract, highlighting ambiguities and potential and/or proven problem areas. This is an excellent reference, however, its usefulness is limited to discussion regarding standard forms of contract currently in use. It does not explore alternative forms, nor does it attempt to propose any.

Other texts, such as those by Cooke (1989, 1991), encompass issues relating to the
building professions and the industry generally. Both books are useful in so far as they provide an overview of the principal issues affecting the relevant participants. They highlight problem areas and provide some historical background regarding the building process, the participants and the product.

Standen (1981) is useful in that it provides definitions for terms used in the practice of architecture and the building industry generally. However, since it is primarily a dictionary in nature, its use is also limited.

While each of the texts consulted are useful in some way, they are also limited in value in relation to this study. There are several reasons for this including the fact that they deal either with general circumstances or standard conditions. They do not explore issues relating to non-traditional or alternative methods and systems. Likewise, little if any (with one or two exceptions) consideration is give to matters such as project delivery systems, quality control and assurance, the building process and relationships between participants.

3.2 PUBLISHED ARTICLES

The published articles consulted for the purposes of preparing this thesis are industry based. They cover a variety of topics including standard forms of building contract, dispute resolution, project delivery systems, quality assurance and quality control, the Royal Commission into Productivity in the Building Industry in New South Wales, individual project case studies, industry regulations and controls, and current trends within the Australian building industry. The source of these articles includes a number of industry based publications (refer Bibliography). The authors, when identified, reveal a variety of training and experience. They include design professionals, builders and other para-professionals, industry representative bodies and organisations, academics, and other industry participants.
These articles have provided both a basis for discussion and further investigation. Some theories and arguments proposed therein have been incorporated into this study. Likewise, some information is considered fundamental to the area of study and has been included in that context.

3.3 CONFERENCE NOTES AND PAPERS

A variety of Conference Notes and Papers were considered and utilised for the purposes of preparing this thesis. A list of actual documents referred to can be obtained by reference to the Bibliography at the back of this thesis.

The Notes and Papers cover numerous topics and issues relating to the Australian building industry. Of these, the most predominant and popular topics relate to causes of claims, dispute resolution, methods of project delivery and contracting. The conference presenters and authors include architects, builders, lawyers and other industry participants, thereby providing a cross-section of experiences, views and opinions prevalent throughout the industry.

The majority of these documents are limited to the common condition. That is, they relate to matters associated with standard forms of building contract and a variety of recognised systems of project delivery. To a lesser extent, alternative methods of delivery, such as novation, are covered.

These documents provide an appropriate basis for further investigation of issues pertinent to the focus of this study.
3.4 R.A.I.A. PRACTICE PUBLICATIONS

A variety of R.A.I.A. Practice Publications, including Practice Notes, Law Notes, Management Notes, Cautionary Notes and Reports were considered and utilised for the purposes of preparing this thesis. A list of actual documents referred to can be obtained by reference to the Bibliography.

The information contained in these documents covers matters relevant to the practice of architecture, the architectural profession, as well as issues affecting the delivery of projects, and the Australian building industry generally. They encompass a variety of parameters including professional, legal, and managerial factors and influences. Although these documents are each accompanied by a disclaimer regarding their accuracy and/or validity, they are still widely used by members of the Australian architectural profession. In consequence, they form the basis of operation for many architectural practices. Information contained therein is often used as a guide to the implementation of correct, or at least recognised, methods of professional practice in the Australian context.

It is, therefore, considered particularly relevant to utilise these documents for the purposes of this study and area of research.

3.5 FORMS OF STANDARD BUILDING CONTRACT

The most commonly used forms of contract are discussed in Chapter 5 of this thesis. Three of these forms, namely JCC, NPWC 3 and AS 2124 are dealt with in detail, including definitions, in that chapter.
3.6 FORMS OF NON-STANDARD BUILDING CONTRACT

Various forms of non-standard, namely novation, contract are dealt with in considerable detail in Chapter 8 of this thesis.

3.7 HIGHER DEGREE THESES

In respect of South Australia, there are a small number of Masters theses covering aspects of the Australian building industry. It should be noted, however, that they were not prepared for the purposes of gaining a Master of Architecture Degree. Instead, two of these were prepared for the purposes of a Master of Applied Science in Project Management. They were submitted to the South Australian Institute of Technology (now known as the University of South Australia).

The first of these research studies is entitled "The Construction Industry in Australia" by C.H. Koay. It was submitted in 1984 and involved a study of the nature and characteristics of the Australian building industry and its role in the economy. It also proposed some long and short term strategies for the industry. The thesis investigated the nature and structure of the construction industry providing basic definitions, and an indication of the nature of various factors including construction products, the construction process, employment in the industry, industrial relations, construction firms, market structure of the industry, tendering and contracts in the industry, and industry concentration. Most of this information consisted of definitions and statistical data. Issues associated with contracts were superficially considered.

The building industry's role in the economy was also dealt with statistically, providing data on the industry's influence upon this country's Gross Domestic Product and the general workforce. Several economic effects upon the industry were considered, namely credit
restrictions and economic fluctuations. Governmental influences, particularly in relation to economic policy, were also investigated. The study provided an overview of several policies including fiscal, monetary, wage and price, and balance of payments.

Additional economic issues were explored including the micro-economics of the building industry and construction. This part of the study included definitions, and discussion on specific issues relating to the building industry. These included market forces, supply and demand, forecasting of demand, and determination of price.

Koay provides a 'synthesis' at the end. It encompassed a variety of issues including the government's role in the management of demand for the building industry, the effects of inadequate and excessive demand, an assessment of the building industry's capacity to perform, industrial relations framework, rational tendering and contractual arrangements, and management frameworks.

Koay's conclusion stated that it was intended to be a broad and superficial overview, and that it was hoped aspects of the matters raised would lead to further study at another point in time. A review of this thesis revealed that this statement was indeed accurate, and it could only be used as a general guide to investigations of the Australian building industry. In particular, issues relating to project delivery systems and building contracts lacked in-depth consideration. Likewise, the study did not appear to propose nor explore any identifiable arguments regarding factors affecting the industry, nor does it attempt to predict future trends. This provides a significant difference when comparing Koay's thesis with that of this author.

The second of the theses to be reviewed was entitled "An Investigation into the Incidence and Implications of Claims in Differing Contractual Environments in the Building Industry" by T.F. Hooper. It was submitted in 1984 and involved a study of the claims on building industry projects in South Australia. It investigated the relationships of incidence and magnitude of
claims to contractual procedure and project implementation. It also explored the satisfaction levels of differing contractual arrangements and project organisations as perceived by the participants. It offered a comparison of the performance in various phases of implementation with theoretical and empirical research inside and outside Australia. A total of sixty South Australian projects were surveyed, ranging in value from $750,000 to $14 million, encompassing domestic, commercial and industrial developments.

The initial part of the thesis investigated issues associated with the construction environment. It included factors such as client involvement, design processes, tendering procedures, contract form and type, builder involvement, and control mechanisms. Differences exist between this thesis and that of this writer in relation to these aspects. Hooper’s thesis considered only standard forms of contract, namely MBW 1, NPWC 3, AS 2124 and Edition 5b. Alternatives were not considered. Likewise, in respect of contract type, some were mentioned, including design/construct, turnkey and project management, however, no indepth discussion was provided.

The remainder of the thesis centres around the survey used. It included discussion on how the survey instrument was developed and the implementation of same. The study also included an analysis of the data collected and consideration of the results of that analysis. In relation to this latter aspect, ‘degrees of satisfaction’ (numerical and descriptive) were explored. The results were categorised in respect of participant occupation, client type, form of contract, tender type and origin of tender documents, document type, Brief origin, and management. Participant answers provided related to personal preferences regarding contract form, tendering procedures and so on. A comparison of results is then made.

Hooper did not explore issues relating to alternative forms of contract. Hooper limited discussion to preferences of selected standard forms and systems. Certain issues relating to the potential for claims were raised, but were addressed in respect of specific responses. Unlike the author’s thesis, this study does not explore influences or trends relevant to any
particular circumstance or outcome. Likewise, its frame of reference is essentially limited to the State of South Australia as opposed to embracing a national perspective.
This chapter deals with a brief history of contracts, both in terms of general contractual history and the history of contract law in Australia, and with the legal terminology and legal issues associated with building contracts. It is presented here to provide a basis for the succeeding chapters.

4.1 HISTORY OF CONTRACTS - GENERAL

4.1.1 Contracts - How they began

The following information pertaining to the history of contracts has been primarily based on the text by Greig and Davis (1987) which provides a comprehensive overview of the subject matter.

The role of contracts is fundamentally concerned with promises and the enforcement thereof. It is because of the notion of “fulfilling obligations” that contracts evolved. Promises, in turn, may be broadly divided into two groups - those which should be enforced (these may have strong moral obligations or societal influence) and those which are beyond legal influence, control or protection. Discussion as to which category any particular promise may belong could, in itself, lead to lengthy legal argument.

When giving consideration to the enforcement of promises and fulfilling of obligations, Greig and Davis (1987) argue that legal developments often arise out of the desire to satisfy practical needs and concerns. That is, a situation arises which, at the time, it is felt by the
parties concerned, requires the establishment of some form of justifiable system of legal protection.

The concept of offering some form of consideration, whether it be in terms of financial or other material remuneration, the provision of services, or the meeting of duties, was traditionally the only apparent basis for enforcing promises. Initially, promises were regarded as having conditional obligations if they could be defined as "benefit based" - the provision of goods or services by one party for the consideration in return by another party of money, goods or services.

The concept of liability based on reliance and expectation must also be considered. For example, party 'A' relies on party 'B' to perform a particular task, while party 'B', in turn, relies on party 'A' to provide consideration for that service. Likewise, there is an inherent notion of expectation present - each party expects the other party to "perform" or fulfil their individual obligations, as defined by the relevant promises given.

The notion of contract can be formally traced back to medieval times when (Greig and Davis, 1987, p.3):

*Medieval society was not only stratified on a social scale, it was also compartmentalised... Trade was conducted by the mercantile community whose dealings were governed by the law merchant which had a similarly wide currency throughout Europe and the Mediterranean. As to the community as a whole, their transactions were few and, with certain limited exceptions, created little need for regulation by the developing system of centralised national courts.*

The earliest types of contract included those which were written and those which were based on some form of verbal agreement. Written agreements were known as deeds (Greig and Davis, 1987, p.3):

*A promise contained in a deed, that is to say an instrument "signed, sealed and delivered" by the promisor to the promisee, is to this day regarded by the common law as imposing an obligation upon the former to perform the promise. Alternatively, a recognised form of words might have been all that was necessary to make the promise legally effective. Under classical Roman law a promise known as a stipulatio*
required the use of a particular form of question and answer to be effective. In the Middle Ages, there was widespread use of written agreements which contained a specific reference to a promise per stipulationem.

Likewise, in mainland Europe, the shaking of hands at the end of negotiations was also considered as “sealing the deal”, while in England (Greig and Davis, 1987, p.4-5):

...the royal jurisdiction was principally concerned with keeping “the King’s peace”, and with settling property disputes between subjects...The intervention of the King’s court took place through the writ of covenant and of debt. The former was the means of obtaining redress for breach of the undertaking made solemnly by way of deed. Though this requirement may not have been necessary originally, it had become a hard and fast rule by the 14th century, thus preventing covenant fulfilling “the promise of its name” and providing “a general contractual remedy...”

...The development of debt as a contractual remedy was circumscribed by the fact that it was, and remained, dependant upon the prior performance of a specified act...by the promisee before the promise could be enforced. It did not apply to render enforceable a simple executory exchange of promises...

The general law of contractual liability was founded in the period from the late 14th Century through to the 16th Century. This development was referred to as “assumpit”. The reasons for these developments were based on political, social and economic grounds. Situations changed and became more complex, and it was found that the methods of dealing with promises, obligations and subsequent disputes could no longer be dealt with under existing societal structures. According to Greig and Davis (1987, p.7), new systems had to be formulated, adopted and modified:

By the end of the 16th century..."consideration" in the sense of motive or reason was a necessary element in the pleading of assumpit...It is less clear how it was transformed from a matter of pleading and evidence into a constitutive element of a binding contract.

By the 17th Century, a promise was by its very nature and existence considered to be “good consideration” for the other party to fulfil their obligations in the agreement and was, therefore, binding. It was not deemed necessary to prove that the person making the promise had actually undertaken to realise their obligations (Greig and Davis, 1987, p.9):
...From a practical point of view, to enforce a promise to build a house before the promised payment had been made would have seemed a natural development: why should it be classified any differently from a situation where the payment had been made to induce the promise? However, in terms of legal theory the change was fundamental: it became necessary to provide a justification or rationalisation for the enforcement of promises which left performance on both sides to the future...

In 1677, The Statute of Frauds was passed. It was developed as a result of Lord Mansfield who, at the time, introduced a radical reform that a whole range of contracts where unenforceable unless the particular agreement included a written document, in part or whole, and which was duly signed by the party to be charged or alternatively his agent as authorised.

With the arrival of the 18th Century came a new public awareness and a new morality. It was also the beginning of the industrial revolution. Britain was no longer a rural society with its economy based on agriculture. It had been transformed into an urban society with manufacturing taking a leading role in the development of the nation. During the late 18th and early 19th Centuries, writers of the law began formulating broad principles of contract law. This was, at the time, a concept new to common law, and was seen as a dramatic attempt to create a comprehensive series of texts on the issue. By the latter part of the Century, contractual theory had developed further and extended the “offer/acceptance” approach (Greig and Davis, 1987, p.21) to:

...explain the formation of contracts by correspondance, to an all-embracing formula for establishing the concensus, or meeting of minds, which...came to be regarded as necessary for making a contract.

The concept of “freedom of contract” was born out of this notion of consensus theory, and came about as a result of the new order, representatives of which were becoming impatient with the legacy of the previous Century. This concept became a basis for issues of individual liberty, and developed into a principle element of 19th Century common law.

Greig and Davis (1987, p.27) argue that little then changed, since:
With the advent of the present century, freedom of contract persisted as a theoretical basis of contract law, despite the fact that the justifications for the theory were crumbling. It was essentially an individualistic concept: contract was the means whereby each person could plan and control his own destiny. The law was slow to recognise that already this was ceasing to be a true reflection of the social and economic world in which people lived.

### 4.2 HISTORY OF CONTRACTS - AUSTRALIA

#### 4.2.1 Australian Contract Law

The law in Australia is based on the English legal system, and more specifically on English common law. The common law system distinguishes itself from other legal systems by the utilisation of what may be termed "judge-made" law. The term "common law" is often used to describe the entire English legal system, or at the other end of the spectrum, may differentiate between common law rules and principles of equity.

In order to investigate the history and principles of contract law, it is necessary to investigate the source of law and legal judgements. Cooke (1989, p.1) states that:

*Case law is one source of the law. The other source is Parliament where legislation is enacted, including legislation delegating to some other appropriate body that power to make law (building regulations, for example). The law is constantly changing, partly as a result of the development of case law, partly as a result of new or amended legislation. Where a case calls for the interpretation of legislation the result will not necessarily be to the liking of Parliament. This can lead to amendments in legislation in an attempt to remove ambiguities and close loopholes perceived by judges...the judicial interpretation will stand until overruled in a subsequent case or overtaken by an effective amendment to the legislation.*

Over recent years, Australian law has varied somewhat, particularly in the area of commercial law, with the primary reason for this being statutory intervention. Contracts, under common law, were developed over many centuries, and have remained, for the most part, unchanged.
Australian national economics played a major part in the development of contractual law and
the principles of laissez-faire (i.e. "freedom of contract"), in Australia. The notion of the
acceptance of laissez-faire is outlined by Greig and Davis (1987, p.30):

Despite [the] fundamental differences between the Australian economy and the
economies of the United States and Britain, which more closely resembled the
theories of laissez-faire, laissez-faire flourished as a cardinal doctrine in the
Australia of the mid-19th century. This was understandable as the period from 1820
to 1860 had been one of rapid economic growth, first through the production of
wool...then through the gold rush in the eastern part of the country...Wool production
was complementary to the requirements of British industry and coincided therefore
with the conception of empire free trade.

With the decline in gold production and the corresponding demands for alternative
employment by immigrant miners came the development of the movement for
Protection....Drought, increased competition from overseas and a decline in British
investment, all contributed to the depression of the 1890's. Not only did this increase
the pressure towards Federation, but it also ensured that the new Commonwealth
would adopt tariff protection as the basis of its policies towards the outside world...

The notion of laissez-faire developed a community attitude that government regulation should
be kept to a minimum so as to allow its citizens to proceed unhindered with their lives.
Although this attitude existed, it was not a true reflection of the reality of the situation
(Greig and Davis, 1987, p.31):

...the freedom of choice, in terms of contractual relationships, was narrowing with
the restrictive or monopolistic developments in the supply of goods or services.
Nevertheless, the law continued to pay homage to the freedom of contract.

4.2.2 Trade Restrictions and Government Intervention

The practice of monopolising markets and restricting trade to the detriment of the public
interest, continued into this Century, and in 1906 the Commonwealth Parliament passed an
Act, known as the Australian Industries Preservation Act which outlawed the restriction of
trade or commerce where public interest was threatened. The whole issue of protecting the
public interest became of increasing concern to both the English and Australian
governments, and (Greig and Davis, 1987, p.37):
...[in] 1956 the British Parliament passed the Restrictive Trade Practices Act, s. 21(1) of which specifically deemed that restrictions contained in any agreement to which the Act applied were "contrary to the public interest" unless the court was satisfied that the restriction was justified on the grounds set out in that provision. In the event, the Commonwealth Trade Practices Act of 1965 did not follow the British approach, but adopted what might be termed a secondary or indirect presumption stemming from the requirement in s. 50(1) that, in considering whether any restriction was contrary to the public interest, the Trade Practices Tribunal was to "take as the basis of its consideration the principle that the preservation and encouragement of competition are desirable in the public interest".

It was not until the Trade Practices Act 1974 (Cht) that comprehensive legislation was passed striking at a range of trade activities which had the effect of lessening competition.

This Act was later amended to form the Trade Practices Revision Act 1986. It should be noted that although the Act originally evolved out of contract law and the need or desire to eliminate non-competitive trade and commerce which, it could be argued, is in itself desirable, it did in fact have a significant impact on other sectors of the Australian building industry, such as the area of professional consultancy (refer also Chapter 6, this thesis).

4.2.3 Limiting Liability

All current day contracts, whether used for building purposes, sale of goods or other services, incorporate clauses which limit the liability of either or all parties. This however, is a relatively recent development since it was not until the early part of the 19th Century that English courts began to look at the question of whether goods or services offered for sale were, in fact, merchantable. It was at this time that clauses began to appear in contracts which resulted in the liability of sellers (and purchasers) affording limitation. Such limitation of liability had two origins. The first related to insurance and the carriage of goods, while the second related to the sale of land and the protection of vendors of large items of 'personal property' such as ships. In Greig and Davis (1987, p.42), it is proposed that '[the] appearance of such clauses at this time coincided with the increasing preparedness of the courts...to imply certain terms as to quality and suitability into contracts...'. By the latter part of the 19th Century (Greig and Davis, 1987, p.44), '...the trend towards more
elaborate clauses excluding or limiting liability was accelerating'.

## 4.3 THE FORMING OF CONTRACTS

### 4.3.1 Simple Contracts and Deeds

A contract is described as a legally binding agreement between two or more parties, and in order for such an agreement to exist, certain technical requirements must be satisfied. A 'simple contract' is effected where one party makes an offer to do something for another party in exchange for a certain consideration (generally monetary), and an acceptance by the second party to the offer of the first party. Provided there is no legislation to the contrary, a simple contract need not be in writing. Cooke (1989, p.8) explains that:

> A typical building contract results from the proprietor's acceptance of a builder's offer (tender) to construct a building for a sum of money. A contract may be formed as a result of this process of offer and acceptance notwithstanding the parties' express intention to enter into a written agreement in the future...

Cooke (1989) goes on to explain that a 'deed is a sealed contract in the legally correct form.' Unlike with a simple contract, no consideration is needed in this form to be binding. Simple contracts generally have a six year limitation period for actions, but with deeds a longer limitation period applies. Cooke (1989, p.8) states that:

> A contract will not exist unless there is an intention to enter into a legal relationship, the parties have the legal capacity to form a contract and have consented to the agreement without coercion. The courts will not uphold an agreement to engage in an illegal activity.

As a result, the need to define implied meanings and intentions together with clarification and justification of interpretations, becomes of paramount importance to the use of contracts. Indeed, there is often more than one meaning to a single word or collection of words. Therefore, it is necessary to be able to define and identify implied meanings, such that the
risk of misinterpretation is reduced or, preferably, eliminated.

4.4 TERMS OF THE CONTRACT

Graw (1990, p.7) states that in order for a contract to be ‘an agreement enforceable at law’, it must be composed in a certain way, and ‘exhibit certain key characteristics’. That is, it must be structured in a manner acceptable to the judicial system and in accordance with their guidelines. Graw (1990, p.8) goes on to state that the essential characteristics or elements of the contract are:

(a) offer;
(b) acceptance;
(c) consideration (not required for contracts under seal);
(d) intention to be bound;
(e) mutuality;
(f) capacity; and
(g) legality.

The agreement is essentially made up of the offer in association with the acceptance, thereby being given ‘legal force’. In the case of simple contracts, a consideration must exist since this, in turn, creates an obligation. The intention to be bound is required since the courts will only enforce that which is intended to be enforced, and the parties must agree on the same thing (i.e. mutual agreement). It is also important that the parties are, in fact, capable in legal terms, of reaching a binding agreement, and that the subject matter of the agreement is in itself legal.

4.4.1 The Offer

Graw (1990, p.10) defines the ‘offer’ as:

...a promise to do or refrain from doing something else, usually upon condition that the offeree, the party to whom it is addressed, agrees to do or refrain from doing something else. An offer may be “express”, using written or spoken words, or it may be “implied” from the offeror’s conduct. In either case the one essential is that the
offer must be promissory - it must be intended that it can be converted into a binding obligation by valid acceptance and the offeror must be prepared to honour it if called upon to do so by the offeree.

When discussing the issue of offers, certain matters must be considered. One of these is the distinction between an offer and the supply of mere information. Graw (1990) explains that if information is supplied, upon which a decision or particular course of action may be taken at a later point in time, it does not in itself constitute an offer. That is, if there is no firm promise, there can be no actual acceptance and, therefore, a contract cannot exist. It is also considered vital that the offeree is clearly defined, since it only the offeree who can accept an offer. Offers and "invitations to treat" are two distinct things. Graw (1990, p.11) explains that:

Nothing an offeror says or does can result in contractual obligation unless the offeror intended that the offer could be accepted, thereby creating an obligation. Often, what may appear to be an offer will not be an offer at all because it does not expressly or impliedly contain a definite declaration by the offeror that it will be honoured upon acceptance. In such cases all that exists is a statement of willingness to contract upon certain terms if the other party offers to deal on those terms. [i.e.] the statement is not an offer but an invitation to others asking them to make offers...Such invitations are called "invitations to treat".

Instances of "invitations to treat" include the placing of advertisements (when the term 'for sale' is not used), the display of goods in shops, auctions and tenders. In the case of tenders, which are commonly used in the building industry, an announcement calling for tenders is not generally regarded as an offer. In such circumstances, unless the announcement clearly indicates that the lowest tender will be accepted, the law will interpret this action as an invitation to treat. It is, in fact, the tenderer, who makes the offer, and generally each tender constitutes an individual offer with its own applicable terms and conditions.

When considering an offer, the offeree has four basic options. These are to accept the offer in the terms applicable; to reject the offer; to make a counter-offer; or to ask for additional or clarification of information before finally making a decision. With respect to a counter-offer, this relates to a situation where the offeree (Graw, 1990, p.20) 'indicates a
willingness to deal on terms slightly different from those of the original offer...'. The counter-offer effectively acts like a rejection to the original offer and, therefore, supersedes that original offer.

An offer may be terminated in various ways (Graw, 1990). These include revocation by the offeror (i.e. if offeror formally withdraws the offer); rejection by the offeree (offer cannot be reconsidered and accepted later); time lapse (whether expressly imposed time limit or implied from circumstance); changes in circumstance; failure of conditions (eg: if deal is dependent upon receiving financial approval); death of a party; and supervening incapacity (i.e. if offeror cannot do what would be required under the contract, between when offer is made and offer acceptance, the offer will terminate). This 'effectively negates the offeror's previously existing "promissory" intention' (Graw, 1990, p.31).

4.4.2 The Acceptance

Graw (1990, p.34) defines 'acceptance' as:

...a final and unqualified assent to the terms of the offer, made in the manner specified or indicated by the offeror. It can occur orally, in writing, [or] occasionally, it may be implied from the offeree's conduct.

An offer cannot be accepted by any party other than the one to whom the offer is made and that acceptance cannot occur unless and until the offeree has received that offer. i.e. the offeree must be aware of both the offer's existence and its terms, and an act done in ignorance of an offer cannot be an acceptance of it. The law also deems that (Graw, 1990, p.34) the offer must be 'present in the mind of the "acceptor" when the "acceptance" occurs or there is no true acceptance'.

The only thing which can be accepted is that which is offered in its original state i.e. without addition, deletion or qualification, and (Graw, 1990, p.36) that 'acceptance is...a final and unqualified expression of assent to the terms of the offer'. The manner of acceptance is
optional, but must be effectively communicated, and the offeror must be aware of any provisos before such offer terminates. It should also be noted that silence (i.e. failure to respond verbally or in written form) does not constitute acceptance or refusal.

Finally, an acceptance can be revoked provided that the offeror is advised of that revocation before the acceptance is received. The overall effect of the revocation is equal to rejection of the offer.

4.4.3 Consideration

Graw (1990, p.65) defines 'consideration' in terms of its position in common law, wherein:

...a promise must be paid for to be enforceable. This...is the situation with simple contracts. A gratuitous promise which is not under seal is not enforceable and the promisee has no rights at law.

...that [is] a person who wants to enforce a promise must have paid for it. Only by providing consideration can he or she establish a right to have it enforced.

Graw (1990, p.70) proposes that in order for a consideration to, in fact, have 'value', it must 'have a value in the eyes of the law'. The argument also then arises as to whether that consideration is 'sufficient' or 'adequate'. The courts attitude to contracts generally creates this variance between 'sufficient' and 'adequate'. That is, (Graw, 1990, p.70) contracts:

'...are seen as agreements freely entered into by parties. Should the parties, or one of them, decide to transfer an item of property or a benefit in consideration of a sum less than its true value, then that is the party's business. What is received will be sufficient because it is what was asked for, provided it has some true value.

4.4.4 Intention To Be Bound

The 'intention to be bound' may be defined (Graw, 1990, p.54) as:
...an agreement (an offer and a corresponding acceptance) is not sufficient by itself to constitute a contract. The additional element of "legal obligation" is required and legal obligation will only be present if the parties intended their agreement to be legally significant. If the parties did not contemplate legal consequences, there can be no contract and the courts cannot intervene in any dispute.

Contracts which have a business or commercial purpose, do involve an element of intention. Therefore, upon the failure of one party to perform, the other party would be entitled to seek recourse through the courts, i.e. to sue. If the intention of the parties involved is not clearly defined or obvious, the courts would first have to determine if the agreement was intended to have contractual or legal force (Graw, 1990, p.54):

...the court looks at what was agreed, the circumstances surrounding the agreement, the words used by the parties, the effect of the agreement on the parties and whether they have subsequently acted as though the agreement is binding.

If one party alleges that there was a lack of intention, it will be up to that party to prove it. This can have quite dramatic consequences, since the onus to prove it can often be overwhelming.

4.4.5 Capacity To Contract

In order for the agreement to be enforceable in law, the participating parties must, in fact, have the 'capacity to contract'. While one may argue that each party entering into an agreement will generally have a full and complete understanding of that agreement, this is not always the case.

The law recognises that within our society there are certain groups of people who are not capable of understanding the nature and extent of contractual agreements. These include minors, the mentally handicapped and those afflicted by alcohol. As a consequence, the law provides certain protection for these people. However, unlike the protection afforded these members of our society, other people are considered to have the capacity to contract. As a result, if two parties willingly enter into an agreement, they will be deemed to understand
the nature and extent of that agreement. Failure to familiarise oneself with the agreement (if in writing for instance) will normally not be taken into consideration (unless, perhaps, the situation existed where the person claiming ignorance was not given the opportunity to become familiar with the information contained in the agreement).

4.5 DETERMINING THE TERMS OF A CONTRACT

Although contracts may be in verbal or written form, or indeed, a combination of both, the discussion to follow will primarily restrict itself to written contracts. It should be noted that the courts limit their judgements to the written content. This is known as the parol evidence rule, and can be explained by Graw (1990, p.139) who quotes:

"...where a contract is reduced into writing, where the contract appears in the writing to be entire, it is presumed that the writing contains all the terms of it and evidence will not be admitted of any previous or contemporaneous agreement which would have the effect of adding to or varying it in any way."

The "terms of the contract" can be defined as the individually agreed rules. That is, the rules as created and defined by the parties to whom the contract applies. It may be argued that a contract's worth can only be determined when it is tested in the courts. Graw (1990, p.138) states that in order for this to happen, there needs to be a "breach of contract", and it should be remembered that the 'courts intervene only to enforce what has already been agreed upon and then only if there is a breach.'

The validity of a written contract comes into question when a situation arises which involves the existence of "extrinsic evidence". Graw (1990, p.142) explains that:

Extrinsic evidence may be adduced to show that the contract is, or has become, invalid. This is because the evidence is not as to the contents of the contract but as to some defect in the manner in which it has come into being. Evidence of matters not appearing on the face of the written document will be permitted to prove any invalidity. Matters which can be proved by extrinsic evidence under this exception include duress, undue influence, incapacity, mistake, misrepresentation, frustration and absence of consideration.
One may argue that the use of so-called "standard contracts" is more acceptable, since these have evolved over time and, therefore, have a proven record (whether good or bad). That is, because they have been tried and tested, as opposed to being newly created and untested, there is less likelihood of matters of extrinsic evidence being an issue. On the other hand, new contracts are often based on existing ones and, therefore, it may alternatively be argued that these contracts can employ the "good aspects" and modify, eliminate or replace the "bad aspects". This raises the question of the contract drafter having any self-interest with respect to the contract's content, purpose and intent.

4.5.1 Express Terms Classification

Contracts comprise many terms, but the nature or intent of these terms may vary. That is, different types of terms may exist in one contract. These are described (Graw, 1990, p.151) as 'either conditions or warranties on the basis of their essentiality', and relate to whether a term is critical to the operation of that contract, which involves the notion of "performance of promise", or whether it merely affects contractual obligation.

Graw (1990, p.151) defines "conditions" as:

...major terms of the contract, breaches of which render performance of the contract something substantially different from that which was agreed. For breaches of condition the remedies of repudiation and/or damages are available.

A "warranty", however, is defined (Graw, 1990, p.152) as:

...a minor term of the contract, a breach of which renders the contract different but not substantially different. In general, a breach of warranty can be compensated for in damages and this is the only remedy available for such a contract. The rationale is that if a minor term is breached, the contract may still be performed in substance and a monetary award will compensate the innocent party for any loss or inconvenience.
4.5.2 Implied Terms

The terms of a contract may be "express" (i.e. expressly included in a contract) or "implied" (i.e. 'not expressly included by a court where they are clearly intended by the parties'). Graw (1990, p.155) explains that terms can be implied into a contract in three ways:

(a) by trade usage or custom;
(b) by statute; and
(c) by the courts, in cases other than (a) and (b), where the parties obviously intended the unspoken term to be binding.

(a) TRADE USAGE OR CUSTOM

Although the courts generally argue that it is not their task to imply terms into a contract, but rather interpret what the parties have actually agreed, occasions do arise when this needs to be done. The need for implied terms may arise out of inadvertence or bad drafting of a contract (Graw, 1990, p.156):

One situation where the courts will imply terms is where there is an established practice or custom governing certain types of agreement, whereby such agreements are carried into effect in a certain way. If that practice or custom clearly formed the background against which the parties agreed, then it will, by implication, form part of their agreement. That being the case, the court will take that practice or custom into account and will enforce it along with the express terms of the agreement.

In direct relation to the building industry, Cooke (1989, p.13-14) provides an example as follows:

...there will be an implied term in an architect's or engineer's contract with a client, whether written, oral or partly written, that the professional services covered by the agreement will be performed with due care and skill. Unless there are express provisions to the contrary there will be an implied term in a building contract that a builder will use proper materials and do the work in an efficient and competent manner...
(b) **STATUTE**

Under common law, the parties to the contract determine the terms that will ultimately bind them. However, "statute" (i.e. the presumed will of the people) can still be used to imply terms that have not freely been agreed upon, since statute overrides common law.

(c) **THE COURT**

Graw (1990, p.157) explains that:

...courts have an inherent power to imply terms into a contract where it is obvious that the parties intended them to be included but...failed to include them in their express agreement.

Greig and Davis (1987, p.518-519) state that 'the courts have tended to ascribe the implication of the terms to the (presumed) intentions of the parties...'. They go on to propose that:

Ascribing the implication of terms to the (presumed) intentions of the parties is a device designed by the judges to protect themselves from the censure that they are in fact making a bargain for the parties, or perhaps even bringing one to an end...

(d) **NEGATION OF IMPLIED TERMS**

A term cannot be implied into a contract based upon the presumed intentions of the parties, if there exists an express term in the contract which will be inconsistent with the term which it is intended to introduce. Also, a term cannot be implied if it contravenes a law. That is, (Greig and Davis, 1987, p.523-524):

A term will not be implied which involves a breach of the law. In many cases, the parties to a contract can expressly alter the rules which would otherwise operate, for example in relation to the time or method of performance, or the consequences of breach; and there is no reason why a term might not be implied, in appropriate circumstances, that has a similar effect. What is not permissible, however, is to attempt to establish a term the carrying out of which would result in the commission of an illegal or void act.
There are several circumstances which provide for a term being implied in a contract. These include (Greig and Davis, 1987):

(a) An incomplete contract;
(b) Automatic implication in certain "well recognised" contracts;
(c) An apparently complete contract, with inadequate express terms;
(d) Parties who have contracted within a particular market, trade, profession or locality; and
(e) Implication based on past method of dealing.

If a contract was incomplete, a judgement would need to be made with respect to the intention of the parties concerned. Once that intention is determined, terms may then be implied. This is necessary in order for the law to enforce the contract.

Greig and Davis (1987, p.539) explain that in 'particular types of contract, certain terms are readily implied in order to fulfil what the law regards as the normal expectations of the parties to a relationship...'. Building contracts are included in this group. Terms are sometimes implied in situations where the contract appears complete, but an issue arises which is inadequately dealt with by the express terms. Greig and Davis (1987) state that terms must be:

(a) Reasonable and equitable to both parties;
(b) Necessary to give business efficacy to the contract (i.e. necessary in relation to express terms);
(c) Obvious (i.e. definition of the need for implication and type of term required); and
(d) Identifiable (i.e. use of appropriate words and clear expression, and identification of circumstances leading up to implication).
4.5.3 Rules of Interpretation

The issue of the rules associated with the interpretation of terms is one which often leads to legal debate and a lack of understanding on behalf of the parties to the contract. This is generally as a result that the courts' interpretation overrides that of the parties. This concept is explained by Hocker, Dufty, Heffey (1990, p.276):

*The interpretation of the terms of a contract is part of the process of determining the intention that a reasonable person would infer from the words or other conduct of the parties.*

*The parties are bound by the interpretation placed by a court upon the terms of their contract although one or both of them may have placed a different interpretation upon it at the time when it was made...*

*If the meaning of the words of a contract is clear and not ambiguous, the courts give effect to that meaning. If the words are ambiguous the courts incline towards an interpretation which will produce a consistent, reasonable and workable contract.*

Evidence of the circumstances surrounding the formation of the contract may, in certain instances, be admissible for the purposes of resolving ambiguity. Cooke (1989, p.11) cites an example where:

*...an architect had agreed to do work on the "usual terms". Extrinsic evidence was admissible to explain the meaning of the words "usual terms" - not what the parties or one of them meant by the words, but what the words themselves meant in the light of the relevant circumstances.*

Hocker, et al., (1990) state that factual background information known to the parties at contract inception and evidence of meaning of 'technical or trade terms' is also admissible.

4.6 LIABILITY

Liability in regard to the building industry and its associated professions may arise in criminal law (such as for criminal negligence) but is more likely to arise in civil law
(i.e. in contract and tort) (Cooke, 1989).

(a) LIABILITY IN TORT

Cooke (1989, p.24) states that:

Professional advisers, builders, consent authorities and others whose lack of care is allegedly responsible for death or personal injury, damage to property or financial loss, run the risk of being sued in tort by the injured party...The court will then have to determine not the guilt or innocence of the accused, as in a criminal trial, but whether or not the defendant is liable to pay damages to the plaintiff as a result of committing the tort of negligence.

Cooke (1989) also claims that negligence is of primary significance to the construction industry, and that there are three basic circumstances which can lead to liability in tort. These include strict liability which involves the damage caused by the escape of substances which may affect land/property use or be detrimental to the benefit of the general community; private nuisance which covers interference through damage of land or property by buildings (encroaching walls, excavation resulting in adjoining land/buildings subsiding), smoke, offensive smell, vibrations and so on; and trespass (pedestrian, vehicular, plant and equipment, building structure).

The "tort of negligence" covers situations such as negligence in design which may lead to death or injury to a person or damage to property. In order to further explain this notion Cooke (1989) cites an example where an architect in Florida, U.S.A. failed to inspect some steel flooring reinforcement which, it was later proved, had been incorrectly placed before concrete pour. Formwork had also been prematurely removed. The consequence of this action was that the portion of floor concerned later collapsed, causing injury to a building worker. The court ruled that the architect was the negligent party since the architect had failed to "properly inspect" the work, thus breaching the client/architect agreement which existed at the time.
The essential elements of an action in negligence consist of the following factors (Cooke, 1989):

(a) Duty of care (i.e. the alleged defendant owes the plaintiff a duty of care);
(b) Breach of duty of care (i.e. a breach of duty of care must be proved to have occurred);
(c) Damages resulting from breach of duty of care (i.e. a legal link must be established between the alleged breach of duty of care and alleged damages, together with substantiation of those damages); and
(d) The action cannot be statute barred (i.e. action must be commenced by the plaintiff within the statutory limitation period).

Until ‘fairly recently the courts in England and Australia have held that professional advisers could only be liable in contract to their clients, not in tort’. This is no longer the case, and there is a ‘trend towards recognising concurrent liability of professional persons in contract and tort...’ (Cooke, 1989, p.91).

4.7 DUTY OF CARE

(a) PROFESSIONAL SKILL

In order for a “duty of care” to apply, there need not be an express term in the contract being employed - it can be implied (Cooke, 1989, p.30):

A professional advisor owes a duty to a client to provide the services contracted for in a reasonably competent manner. It may well be that the agreement with the client contains no express term as to the duty of care. A reasonable standard of professional competence will then be an implied term of the agreement...In relation to corporations providing services to consumers in the course of business, this is reinforced by the provision in s. 74(1) of the Trade Practices Act 1974 (Cth) that “there is an implied warranty that the services will be rendered with due care and skill”. 

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Professionals who claim to have "expertise" in a particular area of practice will generally be deemed by the courts as having greater skills than their "ordinary" peers. However, the level of that expertise, the competency of the proponent, and the expectations that a client may be seen to reasonably expect may only be resolved by lengthy legal debate. The question of "duty of care" cannot be considered without also considering the standards of accepted practice at the time that the act of negligence is alleged to have occurred. Cooke (1989, p.34-35) states that:

...[compliance] with accepted practice does not conclusively show lack of negligence, although evidence as to ordinary practice "may materially assist a court in deciding what in a particular case should have been done to meet the requirement of due care".

(b) ESTABLISHING A DUTY OF CARE

There are several issues which can lead to the establishment of a duty of care. One of these is a combination of reasonableness, proximity and foreseeability. Cooke (1989, p.37) provides a quotation which explains the principle:

"...a duty of care arises on the part of a defendant to a plaintiff when there exists between them a sufficient relationship of proximity, such that a reasonable man in the defendant's position would foresee that carelessness on his part may be likely to causes damage to the plaintiff..."

Another major issue relating to the establishment of a duty of care relates to any economic loss that may be suffered as a result of negligent advice offered or other action. This is illustrated with the following example. A client may be considering purchasing a particular site for a specific building development. That client then approaches a professional person (whether that be an architect, engineer, or other building industry professional). The client asks that professional person about the suitability of the site for building purposes, and that professional offers advice without substantiation (e.g. without a soil test being taken) or without qualification (e.g. recommending a soil test). As a consequence of that advice the client purchases the site, only to discover later that the site is not suitable for the proposed development. An action may be brought against the professional person who offered the
original advice, on the basis that the advice was negligent. Negligent advice or representation is not only limited to professionals, but 'includes any advice given in a serious business context...' (Cooke, 1989, p.44).

(c) PROFESSIONAL INDEMNITY INSURANCE

The issue of having or maintaining professional indemnity insurance is one which has led to considerable recent debate throughout the professions and, in particular, building industry professions in Australia. Essentially, professional indemnity insurance is taken out to protect the insured against legal claims for negligence or breach of contract. Many policies extend their cover options to include such things as liable and slander. However, Cooke (1989, p.45) explains some of the pitfalls of such insurance:

...those with insurance (or assets) are more attractive to potential plaintiffs than those with no insurance cover or assets. Savings on premiums by having inadequate cover or none at all is not a reliable protection against legal action: the principals or partners or even the individual employees may be worth suing in their own right. Adequate insurance cover or personal financial guarantees may be one of the conditions of engagement insisted on by the client.

4.8 DAMAGES

Damages are one of the remedies for breach of contract (Cooke, 1989, p.67):

In tort an award of damages is the only remedy available to an injured party. In the absence of an effective disclaimer...or contractual limitation of liability (not available against third parties) there is no limit to the measure of damages which may be applicable, provided the defendant is responsible in tort for the alleged damage...

There are two basic forms of damages:

(a) Damages in contract; and

(b) Damages in tort.
(a) **DAMAGES IN CONTRACT**

In this case, damages involves claims such as those relating to non-conformity with the contract (and thus non-conformity with construction drawings, specifications and other documents) and reasonable courses of action to adopt in order to achieve conformity. An example of this may be where a builder fails to erect a building, or part of a building in accordance with drawings and specifications. If the client then requests compliance with the contract, the builder could opt to rectify the defects by demolishing and rebuilding. This may be seen to be a reasonable course of action since it may be the only way of achieving conformity with the original contractual agreement. Needless to say, the builder would only carry out that work which is essential to achieve conformity since, under the majority of standard building contracts in use in Australia today, the cost of rectification work is the responsibility of the builder.

(b) **DAMAGES IN TORT**

In an action for damages in tort, there is a legal requirement that the plaintiff will have to justify to the court any damages claimed. As a consequence, that damage must be converted into an amount of money for the purposes of the claim.

Cooke (1989, p.77) explains that the 'relationship between damage and damages in negligence was described in the following terms by the High Court in *Mahoney v. Kruschich* (1985) 59 A.L.J.R. 504 at 505:"

"In negligence, 'damage' is what the plaintiff suffers as the foreseeable consequence of the tortfeasor's act or omission...Damages are awarded as compensation for each item or aspect of the damage suffered by the plaintiff, so that a single sum is awarded in respect of all the foreseeable consequences of the defendant's tortious acts or omissions".
4.9 LIMITATION OF ACTIONS

The bringing into effect of certain legal actions is regulated by a statutory limitation on time. According to Cooke (1989), there is a basic difference between when limitation begins in relation to contract or tort. With regard to "contract", the limitation period begins when the breach of contract initially occurred. In this instance, no actual damage need have occurred at the commencement of that period. In tort, however, the limitation period begins when a defect is discovered or damage is sustained. This also applies if economic loss is being claimed as a result of the defect.

4.10 COPYRIGHT

Copyright applies to matters such as the design of buildings or building developments. This is of primary concern to building design professionals, especially architects. According to the Copyright Act 1968, architectural drawings, models and completed buildings are treated as intellectual property, but ideas (architectural or other) are not. As a result (Cooke, 1989, p.108-109):

Applications of new architectural ideas and concepts by those who follow the leaders in their profession are legitimate, and will not be restrained by the copyright laws. There is a clear distinction between the protection which the law will afford to an architect's plans on the one hand, and, on the other hand, the absence of any protection to the architectural idea or concept which may happen to be expressed in a given set of plans. The same distinction applies in the case of a completed house.

The copyright law will prevent the building of another house which reproduces a substantial part of the original house where such reproduction comes about as a result of a copying of the physical object itself. But the law does not restrict the application and development of architectural concepts and styles: original concepts and styles may...be applied and developed by other architects in subsequent buildings.

The question of "licence to build" may sometimes arise. A client has an express or implied licence to construct the building(s) that the architect has designed for a particular site. Generally, unless it is expressly stated in a contract, the client is not licensed to build that
building more than once. Refer also Chapter 8, Item 8.5.1(k).

4.11 SUMMARY

The development of contracts and their use, irrespective of their individual purpose, is something which has evolved over a considerable period of time. They have been created, amended and revised on the basis of either various tried cases and/or governmental legislation. Although Australian law is fundamentally based on British law, it still has its own distinguishing features, conditions and precedents.

There are certain issues associated with contractual terminology which may have an effect on contracts, irrespective of whether they have been drafted for use in the building industry or for some other purpose. An understanding of that common terminology and its use is vital if one wishes to consider specific types of contracts such as those used for building.

In relation to building contracts there are various issues which frequently cause concern for the parties either directly or indirectly involved. There are, for example, aspects associated with professional conduct, the consequences of which can lead to legal action against the professional. Such action is often the result of alleged breach of contract between the architect (or other professional) and the client. However, it should be noted that exercising "duty of care" can also be a part of a contract between a builder and client where the architect is acting in the capacity of client's agent. Alternatively, other aspects relating to building contracts may have direct consequences for the builder or the client. It is imperative for ALL parties to the contract to understand matters relating to terminology and, at the same time, be fully aware of the consequences of intentions and actions.
This chapter describes some of the most often used “standard” building contracts in Australia, and identifies their important and notable aspects.

5.1 BUILDING CONTRACTS - GENERAL

A building contract (i.e. a head contract) essentially involves two parties - the proprietor (also known as the owner or principal) and the builder (also known as the contractor). In some forms of contract, provisions exist for third parties, such as an architect or engineer to act, for example, as an agent for the proprietor. The role of that third party would be to inspect the works and/or administer the contract, and that party’s fees would normally be paid by the proprietor (i.e. the client).

Despite the fact that the head contract is between the proprietor and the builder, the Australian building industry operates on a sub-contracting system and, as a result, the builder sub-contracts the work associated with various “trades”. Although the builder may not actually carry out the physical work, it is the builder who pays the sub-contractors and is ultimately responsible for their work. Generally, separate contracts will exist between the builder and the relevant sub-contractors.

The role and contractual position of consultants to be engaged during the design and construction of a building must also be considered. In some projects, consultants are engaged directly by the proprietor and are not included in the head contract. In other situations, however, consultants are provided for under the conditions of the building (or head)
contract. Matters such as who is responsible for their integration and direction also need to be understood.

Over the last two decades, trends within the Australian building industry have led to the evolution of "construction managers" and "project managers". Essentially, a construction manager takes the role of the builder, and in so doing takes responsibility for the execution of the works, including organisation and integration of trades. In this case, separate "trade contracts" may be entered into, instead of the more traditional builder/sub-contractor arrangement. Project managers, on one hand, may also be described as taking the role of the builder, but on the other hand closer scrutiny of their role in recent times reveals that they have also become "principal consultants" and, in many cases, been responsible not only for construction matters but also design aspects, land acquisition, feasibility studies and even project finance. Contractual arrangements which cover construction managers and project managers are not normally a feature of standard building contracts.

5.2 TYPES OF CONTRACT

There are generally considered to be four basic types of building contract (Cooke, 1989):

(a) Lump sum contracts;
(b) Schedule of rates contracts;
(c) Package deal contracts; and
(d) Cost plus contracts.

5.2.1 Lump Sum Contracts

Lump sum contracts are sometimes referred to as "fixed price" contracts. They imply that the work will be done for a specified sum of money, on or before a specified date. However,
the use of the words “lump sum” are not an assurance the cost will remain as agreed or that the date will be met. An example of a judge’s decision is cited by Cooke (1989, p.196) in relation to an arbitration involving Taylor Woodrow International Ltd and the Minister of Health (1978):

“as is not unusual and indeed almost a matter of course nowadays, it is common ground that the builder must eventually get much more than... [the contract sum] due, primarily, to three causes: variations in the work, delays in its execution, and increases in building costs”.

In regard to “fixed price” contracts, the contract sum is not normally subject to cost adjustment for reasons of labour and/or materials cost increases, and thus the builder is not compensated for same.

As with many types of contract, the method of selecting a lump sum or fixed price offer can be done in several ways. Selection basically relates to the method of tendering or negotiation employed for the project. That is, in the case of competitive tendering, it may be chosen as the result of direct selection of one of those tenderers, or after negotiation with one of those number of tenderers. Alternatively, if competitive tendering is not a considered option, after direct negotiation with one builder.

Lump sum contracts may, in some instances, also include approximate or provisional quantities for one or more items in the bill of quantities (Cooke, 1989). With this type of contract, it is usual practice for the actual quantities to be accurately measured at a later date, and associated rates applied in accordance with the bill of quantities. If a situation exists where all the items are provisional it will, by consequence, result in a “provisional contract”.

5.2.2 Schedule of Rates Contract

This type of contract is used in situations where full documentation prior to commencement
of construction is either not possible or not desirable. That is, in cases such as "fast tracking" where, due perhaps to time constraints, work needs to be commenced on site before full documentation is available; or if alteration work involves significant excavation work under difficult conditions. In cases such as this, it is important that sufficient information, based on estimated quantities, is provided to the builder such that appropriate rates may be determined.

5.2.3 Package Deal Contracts

Cooke (1989, p.200) describes a "package deal" contract as 'a lump sum contract in which the proprietor buys the builder's design input as part of the construction contract'.

Design/construct contracts, where the builder is responsible for full design, fall into this category, as do other situations where the builder is only responsible for part of the design. Cooke (1989, p.200) warns, however, that:

Delegating the design does not relieve the builder of liability to the proprietor for defects although the designer may in turn be liable to the builder in contract and tort and to the proprietor in tort for negligence...[and simply] characterising a contract as a "package deal" or a "turnkey" contract...does not ensure that the builder is responsible for aspects of the design.

Cooke (1989, p.202) goes on to state that where 'a builder is responsible for the design, he impliedly accepts responsibility for it and impliedly warrants suitability for the required purpose'.

5.3.4 Cost Plus Contracts

The use of "cost plus" contracts should be only be implemented if no other form of contract is appropriate (Cooke, 1989). The disadvantages appear to far outweigh the advantages. The disadvantages being that the pricing of work is uncompetitive, a final completion date cannot generally be determined, and the proprietor has less control over the final cost (compared with other types of contract). One advantage is (Cooke, 1989, p.202), however, that:
...the price disadvantage in comparison with a lump sum price may to some extent be offset by the proprietor's assumption of risks usually carried by, or shared with, builders whose lump sum prices would include a hedge against risk.

Essentially there are two types of cost plus contract. These are "cost plus fixed fee" and "cost plus percentage fee", and with either of these systems, it is critical that any claims made by the builder are thoroughly checked. This should be done to substantiate not only the rate or cost applicable but, perhaps more importantly, whether the claim is justifiable or valid at all. Likewise, it is considered important that in order to reduce or eliminate the risk of dispute between the contracting parties (Cooke, 1989, p.203), 'a clear definition of costs to be borne by the proprietor and items covered by the builder's fee' should be defined at the outset. Failure to define or clarify such issues will generally result in an implied term applying, the consequence of which means that work would be charged 'at a reasonable rate'.

There is little doubt that this in itself could lead to considerable legal debate. Cost plus contracts can be considered in two forms:

(a) **COST PLUS FIXED FEE**

Cooke (1989) considers this to be the more advantageous of the two systems. In this case, the builder is paid a fixed fee in addition to the actual cost of carrying out the work. This in itself could be considered to have some commercial incentive for the builder to complete the works in the shortest possible time, irrespective of whether a completion date has been established. That is, by reducing the construction time, the builder would have a greater potential profit margin on earnings (fixed fee) received. However, in cases where the builder is not compelled to pay sub-contractors as they complete their work, but rather when the builder is paid by the proprietor, that incentive can be significantly reduced.

(b) **COST PLUS PERCENTAGE**

Cooke (1989) considers this to be the least advantageous of the two systems. The main
reason for this being since the builder can apply a percentage fee (covering overhead and profit) upon all work carried out, there is no incentive to either keep actual costs down or reduce the time frame. At the same point in time, there exists a very real risk of the builder making excessive or fictitious claims.

Variations to this type of contract do exist. They include clauses which provide for bonuses to the builder for early completion or, at the other end of the spectrum, penalties against the builder or compensation due to the proprietor for time overruns. Final cost can be controlled to some extent by the inclusion of clauses which provide for a guaranteed maximum price. Under these circumstances, however, it is important that matters such as what constitutes a "variation", are adequately defined. This is necessary so as to avoid a situation where the builder may be at liberty to make a claim for monies in excess of that guaranteed maximum price.

5.3 FORMS OF CONTRACT

There are several forms of building contract currently in use in Australia which may be called "standard contracts". These are contracts which have been developed, and revised, over many years. Some of the more commonly used ones include:

(a) NPWC 3 (National Public Works Conference General Conditions of Contract, Edition 3 (1981));
(b) AS 2124 (Australian Standard 2124 - 1986, General Conditions of Contract);
(c) JCC (Joint Contracts Committee Building Works Contract, 1985);
(d) SBW2 (Lump Sum Contract for Simple Building Works, Edition 2, 1992); and
(e) E5b (Lump Sum Contract Edition 5b).

There are others including FF/C-Revised edition (Cost-Plus Contract for Building Works,
1977). However, this and other forms shall not be considered, since their frequency of use and general level of acceptance within the building industry is limited in comparison to the forms listed above. The discussion to follow shall limit itself to providing detailed information on three out of the five forms listed previously, namely NPWC 3, AS 2124 and the JCC contracts. The primary reason for this being that subject matter dealt with under Chapter 7 of this thesis, concerns itself, to a significant extent, with these particular contracts.

One major advantage of using a "standard" contract in lieu of one prepared specifically and individually for a particular project, is that there is a greater likelihood the parties involved will have an understanding of the terms of the contract. This is primarily due to the more frequent use of and exposure to these forms by industry participants. Instances do arise, however, where one or more of the parties are unfamiliar with the form of contract, its terms and conditions. This is particularly relevant when the agreement involves a client who is inexperienced in the building process. Advantages can still be evident even under these circumstances. That is, if a dispute does arise, there is a very real possibility that the same type of dispute has arisen in the past, and consequently been tested through arbitration or in the courts. This can mean that a decision previously given can be used as a guide for dispute negotiations, or if legal action is the result, the courts will be basing their judgements on precedents set. If precedents exist, lengthy legal argument concerning intentions, express and/or implied terms, conditions and so on, can potentially be minimised - the result being less costly legal expenses and reduced time frames.

These precedents, in turn, generally result in the contracts being periodically reviewed and revised. Such revision will normally result in a contract with fewer "loopholes" and hopefully minimal, if any, ambiguities. This should, by its very nature, create a more effective document and one which is less vulnerable to the processes of dispute and legal action. In other words, standard contracts have the inherent tendency to be subjected to the "tests of time".
The discussion to follow concerns itself with three standard contracts nominated, and covers aspects associated with the structure of each contract, suitability for particular projects, and their advantages and disadvantages. Each contract is dealt with individually. As various other publications deal in detail with these contracts (e.g. Dorter and Sharkey, 1990), only those matters of particular importance or significant interest to the topic of the thesis are considered and summarised.

5.3.1 NPWC 3 Contract


>This is a lump sum or schedule of rates contract written for use on public works, although its use is not entirely confined to the public sector. The parties to the contract are the [proprietor] and the [builder]. The contract is administered by the superintendent. A feature of the contract is the wide discretionary power given to the superintendent. However, such power is not to be exercised unfairly so as to favour the interests of one party.

(a) CONTRACT PROVISIONS

The following discussion concerns itself with and is limited to some of the more notable provisions in the NPWC 3 contract.

Superintendent

The superintendent maintains a position of advantage in this form of contract. Essentially, the contract has been written for the benefit of that superintendent, and consequently the proprietor. The superintendent's powers are defined in the contract under Clause 23:

For the purposes of this clause the word "direction" includes any agreement, approval, authorisation, certificate, decision, demand, determination, direction, explanation, instruction, notice, notification, order, permission, rejection, request or requirement which the Superintendent may make, give or issue pursuant to the provisions of the Contract.
The implications of such a clause can often be twofold, as stated in Dorter and Sharkey (1990, p.3541):

There have been [builders] who thought they had signed a traditional fixed price building contract, only to find that they were in fact having a “fast track” contract administered upon them but still at the fixed price.

On the other hand, astute [builders] can sometimes turn the wide definition to their advantage (for example in claiming an extension of time or a contract sum adjustment), something which amounts to, expressly or impliedly, a decision or omission of the superintendent.

Dorter and Sharkey (1990) go on to explain that the builder can claim a “direction” was given, in the strictest terms, even though that had not been the superintendent’s intention. Conversely, the builder could argue that a direction was not received from the superintendent even though the project required one to be issued.

Possession Of The Site

Clause 27.1 of the contract states:

The [proprietor] shall on or before the expiration of the time stated...give to the [builder] possession of sufficient of the site to enable him to commence work...and thereafter to execute the work under the Contract in accordance with the requirements of the Contract.

...the [proprietor] may at any time after reasonable notice take possession of any portion of the site for the purposes of carrying out any other work or for any purpose whatsoever.

The first paragraph details that the builder is not necessarily entitled to take possession of the entire site which may affect costs associated with storage of plant and equipment, and site access. If the extent of site to be made available is not determined before the contract comes into effect, the builder could have to bear the burden of costs that would otherwise have been allowed in tender.
The second paragraph illustrates that the proprietor can take possession of the site at any point during the contract, provided notice is given. Under Clause 17 Insurance of The Works, the builder is still responsible for insurance of the works even after practical completion has been reached. Also, the term “practical completion” which relates to the completion of the works, is rather ill-defined and, as a result, argument may arise as to when that date becomes effective.

**Programming And Time**

Dorter and Sharkey (1990, p.4641) state that:

> The four major Australian construction contracts were accordingly drawn so as to include not only the additional, separate, independent and initiating discretion of the superintendent, but also to make it expressly clear that he could exercise that discretion “at any time” (and in NPWC 3...“from time to time”).

In addition to the issue of “practical completion” lacking certain definition, matters relating to the ordering and execution of variations, are also rather open-ended. Dorter and Sharkey (1990, p.4701-4702) explain:

> ...NPWC 3 reserves the power to order variations unto the superintendent “at any time” while work under the contract is progressing, so as thereby clearly to include remedial work...The consequences under NPWC 3 can be twofold:
> (a) as against the [proprietor] and the superintendent, liquidated damages may be lost before the date of actual practical completion; and
> (b) as against the [builder], the nature and extent of variations after the date of actual practical completion may well invite a [builder’s] argument that the scope of the work is so different that he should be paid on a different basis.

It is clear from this explanation that the builder can be requested to perform work, generally in the guise of a variation at any point of time during the contract. This leaves little opportunity for the builder to determine when responsibility under the contract ends.
Extensions Of Time

Clause 27.1 refers to extensions of time:

Should any delay take place in giving the [builder] such possession of the site the delay shall be deemed not to constitute a breach of contract but shall be ground for an extension of the time for completion...

This paragraph is relatively self-explanatory. The builder who is not given possession of the site, cannot claim breach of contract, however, some form of compensation may be applicable in the form of an extension of time. That is, failure by the proprietor to give the builder possession of the site, is considered a reason for approving an extension of time. The apparent reasoning behind this is explained by Dorter and Sharkey (1990, p.4512):

...[NPWC 3] seeks to reduce the [proprietor's] common law exposure by expressing the [builder's] remedy as an extension of time, together with, if the extent and degree of the delay becomes more serious, suspension or determination.

In regard to a builder making a claim for an extension of time, Dorter and Sharkey (1990, p.4581) comment that:

NPWC 3 is fairly draconian in requiring the [builder] to plead with particularity in that he must...specify both the supporting facts and the quantum of days claimed. However, this contract does allow the flexibility in timing that is required in practice, in that 28 days are allowed. Furthermore, there is factual flexibility in the common issue of when precisely the cause of delay arose.

Liquidated Damages

Dorter and Sharkey (1990, p.4741) describe the concept of "liquidated damages" in the following way:

If the [builder] does not achieve practical completion in accordance with his promise in the contract...and if the [proprietor] or superintendent has not himself acted so as to bar the [proprietor] from liquidated damages, the price the [builder] must pay is the liquidated damages called for under the contract.
Liquidated damages are considered as "compensation" as distinct from a "penalty". However, this has not stopped considerable and repeated legal argument on the interpretation of the term.

An examination of the contract itself reveals that there is no provision for the issue of a notice or certificate by the contract administrator, with regard to liquidated damages. This may in fact result in a situation of no liquidated damages being applicable.

**Defects Liability Period**

Provision is made under Clause 37.1 of the contract for differing times of commencement and periods of defects liability:

*If a Certificate of Practical Completion is issued for the Works and no Certificate of Practical Completion has been issued for any separable part of the Works, the Defects Liability Period for the Works shall commence on the Date of Practical Completion of the Works and shall end on the day which the Defects Liability Period for the Works set forth in the Annexure hereto expires.*

*If a Certificate of Practical Completion is issued for a separable part of the Works, the Defects Liability Period for that separable part of the Works shall commence on the Date of Practical Completion of that separable part of the Works and shall end on the day which the Defects Liability Period for that separable part of the Works specified in the Annexure hereto expires.*

*If a Certificate of Practical Completion is issued for the Works and a Certificate of Practical Completion has been issued for a separable part of the Works, the Defects Liability Period for the Works shall extend to those parts of the Works other than that separable part of the Works referred to in the last preceding paragraph.*

*If, pursuant to sub-clause 35.3 [Use of Partly Completed Works], the Principal has used or occupied a part of the Works, the Defects Liability Period for that part of the Works shall commence on the day on which the Principal commenced to use or occupy that part of the Works.*

The NPWC 3 contract provides, in express terms, power for the superintendent to order variations during the defects liability period. Dorter and Sharkey (1990, p.5583) warn, however, that:

*The actual exercise of this power after the date of practical completion must...be approached with great caution so as not to arm the [builder] with the argument that*
the scope of the work has changed, such that he is entitled to be paid on a different (and better) basis. This attack by the [builder] is reinforced by...NPWC 3's failure to recognise, at least expressly, the need to provide for the [builder's] remuneration upon this "back-door" method of requiring the [builder], under the guise of a variation, to carry out defects which are not his fault.

and, with regard to omissions:

...NPWC 3 expressly recognises that omissions, in the sense of item not carried out which should have been for practical completion, are not properly defects...and therefore must be confined to minor omissions within the proviso in the definition of "Practical Completion".

Variations

Under Clause 40.1 of the contract, the superintendent 'may order' the builder to execute a variation if:

...the Superintendent determines that the form, quality or quantity of the work under the Contract should be varied...

and

No variation shall be made by the [Builder] without an order by the Superintendent.

The power of the superintendent to order variations during the defects liability period is merely extension of the power which exists prior to practical completion, and it should be noted that legally an "order" constitutes a "direction". As such, it may either be given orally (provided it is confirmed in writing) or in writing in the first instance. This flexibility is provided for in Clause 23 of the contract. As a result, Dorter and Sharkey (1990, p.3542) argue that:

...a serious question arises as to whether the [proprietor] is adequately protected; especially from [builders'] astute claims which are no longer simply for a variation...but, dramatically, on a quantum meruit or restitutionary basis.

Proprietors and superintendents involved with an NPWC 3 contract, frequently use the variations during defects liability period option since it can avoid interference and
disruption claims if a separate contractor is brought on to site. Care must be taken, however, not to negate the proprietor's ability to claim liquidated damages. It is suggested that a better solution would be to simply enter into another contract with the original builder. That is (Dorter and Sharkey, 1990, p.3546):

*It is important to realise that a general power and discretion to direct or instruct the omission of work already promised to the [builder] cannot be read down too literally. It cannot be abused so as to deprive the [builder] of certain work yet give it to others.*

**Certificates**

Clause 42.6 of the contract covers the final statement by the builder, and discretionary powers are once again given to the superintendent:

*The Superintendent may, before the issue of the Final Certificate...direct the [builder] to furnish to the superintendent a final statement of all the [builder's] claims against the [proprietor] whether under the Contract or otherwise and no claim which is not included in that final statement shall hereafter be made by the [builder] against the [proprietor] on any account whatsoever in relation to the performance and execution of the work under the Contract.*

The contract also empowers the superintendent to initiate the final certificate if the builder fails to furnish the final statement within 28 days of being directed to do so by the superintendent. Aside from this failure to furnish on behalf of the builder, the superintendent is still compelled to issue the final certificate when all work covered by the contract has been executed (to a satisfactory standard) and all the builder's obligations have been met.

Restrictions on further claims are governed by the issue of the final certificate, either upon receipt of claim information by the superintendent from the builder or issue of that certificate upon completion of satisfactory work (without a builder's claim). The superintendent should take precautions to 'elect to direct the [builder] to furnish a final statement before the bar can arise' (Dorter and Sharkey, 1990, p.6562).
The NPWC 3 contract emphasises the physical execution of the works, and the effect of the final certificate for the builder is conclusive evidence that all work under the contract has been finally and satisfactorily executed, except in instances where the certificate is subject to fraud, dishonesty, deliberate concealment, latent defects not previously evident, and/or accidental or erroneous inclusions or exclusions.

With regard to progress certificates, Clause 42.1 of the contract states:

*Unless otherwise provided in the Contract, the [builder] shall submit to the Superintendent a detailed statement, in a form satisfactory to the Superintendent, every month showing the contract value of work carried out in performance of the contract and incorporated in the Works.*

It should be noted that this clause effectively leaves the onus of ensuring that the claim is satisfactory to the superintendent upon the builder.

**Retention And Security**

The most interesting aspect of the provision of security under this contract is the time for lodgement of security by the builder. Clause 5.4 of the contract states:

*The security shall be lodged by the [builder] with the [proprietor] within fourteen days after the date of acceptance of tender or within such further time as is approved in writing by the [proprietor].*

*Failure on the part of the [builder] to lodge the security within the time so allowed is to be deemed to constitute a breach going to the root of the Contract...*

This effectively gives the builder very little time in which to organise matters and failure to comply would mean a breach of contract. The proprietor is not obliged to pay to the builder any interest gained on security. This is covered by Clause 5.9 of the contract:

*Interest will not be payable by the [proprietor] on any cash security or on the cash proceeds of any security converted into money...or on any retention moneys.*
Also with regard to “pulling the guarantees”, this form of contract offers significant rights of recourse (Dorter and Sharkey, 1990, p.5153):

[The contract] can give the [proprietor] what is virtually complete licence for commercial blackmail. Although the [proprietor] may claim bona fides by way of preparation for recourse against cash security, his conversion of non-cash security is often premature. His tactical retaliation to a [builder’s] claim is sometimes to “pull the guarantees” regardless of the bona fides, let alone merits of the [proprietor’s] counterclaims. The commercial consequences to the [builder], including his liquidity, can be very great. Whatever remedies he may have will be comparatively slow and expensive. Accordingly, the [builder’s] common rejoinder is to seek an injunction.

**Determination And Default**

The determination of this building contract can be effected by one of two parties:

(a) by the proprietor; or

(b) by the builder.

In the first situation, where the proprietor determines, payment can be suspended, and the builder called upon (in written notice) to explain why such determination should not be effected, in relation to the provisions of the contract. Some common reasons for determination by the proprietor are because the builder has suspended the works, without reasonable cause prior to completion, or if the builder fails to execute the work in a diligent manner. If determination is effected (Dorter and Sharkey, 1990), the proprietor can complete the works by letting new contracts; take possession of and permit others to use plant and equipment; or take a lien over property.

In the second situation, determination can be instigated by the builder for reasons such as the proprietor failing to pay a progress certificate within the time period as specified under the contract. However, there are no express terms in the contract for determination by the builder - determination can only be effected because of breach of contract at common law.
Disputes And Claims

Dorter and Sharkey (1990, p.7011) state: ‘Extras, variations and prolongation costs are probably the most usual claims’ and recommend that contractual advantages be exploited as soon as possible and certainly before disputes for determination have the opportunity to crystallise. The proprietor and superintendent should also be aware that the builder may prefer not to claim for extensions of time but rather insist that the contract conditions are strictly adhered to. This is particularly relevant when failure by nominated sub-contractors is involved.

The NPWC 3 contract places emphasis on identifying the dispute or difference and ensuring that the claimant cannot diverge from that course of action. It also places all the onus on the builder (Clause 45 of the contract):

```
All disputes or differences arising out of the Contract or concerning the performance or the non-performance by either party of his obligations under the Contract whether raised before or after the execution of the work under the Contract shall be decided as follows -

(a) The [builder] shall, not later than fourteen days after the dispute or difference arises, submit the matter at issue in writing, specifying with detailed particulars the matter at issue, to the Superintendent for decision and the Superintendent shall, as soon as practicable thereafter, give his decision to the [builder].

(b) If the [builder] is dissatisfied with the decision given by the Superintendent, he may, not later than fourteen days after the decision of the Superintendent is given to him, submit the matter at issue in writing, specifying with detailed particulars the matter at issue, to the [proprietor] for decision and the [proprietor] shall, as soon as practicable thereafter, give his decision to the [builder] in writing.
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Dorter and Sharkey (1990) warn, however, that notification of dissatisfaction by the builder with the superintendent to the proprietor should not be limited to the issue alone; it should also contain full particulars of the dispute.
5.3.2 AS 2124 Contract

The AS 2124 contract (Australian Standard 2124 - 1986, General Conditions of Contract), is essentially 'designed for use on civil engineering works and electrical and mechanical equipment contracts' (Cooke, 1989, p.207). It is, therefore, interesting to note that this form of contract has also been widely used for building construction projects - a use for which it was not specifically drafted. The AS 2124 contract has certain similarities with the NPWC 3 contract, particularly in respect of terminology used and, according to Dorter and Sharkey (1990), this version (i.e. 1986) was drafted in an effort to achieve compatibility with NPWC 3. Like NPWC 3, it can be used as a lump sum or a schedule of rates contract.

(a) CONTRACT PROVISIONS

The following discussion concerns itself with and is limited to some of the more notable provisions in the AS 2124 contract.

Superintendent

Clause 23 of the contract refers to the superintendent and the powers vested in that position. The superintendent is required to function under the following guidelines:

\[
\begin{align*}
(a) & \text{ act] honestly and fairly;} \\
(b) & \text{ [act] within the time prescribed under the Contract or where no time is prescribed, within a reasonable time;} \\
(c) & \text{ [arrive] at a reasonable measure or value of work, quantities or time.}
\end{align*}
\]

It expressly states that the superintendent can give a direction and defines "direction" to include:

- agreement, approval, authorisation, certificate, decision, demand, determination, explanation, instruction, notice, order, permission, rejection, request or requirement.
It goes on to state that the direction may be given orally, but needs to be confirmed in writing. However, the builder is not required to abide by that direction until the superintendent has provided the written confirmation.

Under this form of contract, the superintendent is also given discretionary powers. This can be seen in Clause 30.2 which deals with defective materials or work. It states that if the superintendent discovers material or work which is not in accordance with the Contract, the superintendent may direct the builder to remove material from site; demolish work; make good any defective work by reconstruction, replacement or correction; or in the case of pre-delivery, not deliver faulty/unacceptable goods or materials to the site. This discretion of direction also extends to include performance of the work in relation to timing and construction programming. Dorter and Sharkey (1990, p. 3577) explains that:

*AS 2124 [has] useful discretions for the superintendent to proceed instead by way of a variation or other contract sum adjustment. Being discretions, they do not create a duty on the superintendent to exercise them (as distinct from consider them) in order to assist the [builder].*

The suspension of work is another power bestowed upon the superintendent under this form of contract (Clause 34.1):

<table>
<thead>
<tr>
<th>If the Superintendent considers that the suspension of the whole or part of the work under the Contract is necessary -</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) because of an act or omission of -</td>
</tr>
<tr>
<td>(i) the [proprietor], the Superintendent or an employee, consultant or agent of the [proprietor];</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>(ii) the [builder], a subcontractor or an employee agent of either;</td>
</tr>
<tr>
<td>(b) for the protection or safety of any person or property; or</td>
</tr>
<tr>
<td>(c) to comply with the order of a court,</td>
</tr>
</tbody>
</table>

the Superintendent shall direct the [builder] to suspend the progress of the whole or any part of the work under the Contract for such time as the Superintendent thinks fit.

As can be seen from the above quotation, the superintendent has quite express powers with respect to suspension of work. At the other end of the spectrum, the builder also has the
right to suspend the works, but is still subject to the superintendent's approval (Clause 34.2):

If the [builder] wishes to suspend the whole or any part of the work under the Contract...the [builder] shall obtain the prior approval of the Superintendent. The Superintendent may approve of the suspension and may impose conditions of approval.

Possession Of The Site

AS 2124 differs slightly from NPWC 3 with respect to the possession of the site in that (Clause 27.1):

[The proprietor] shall on or before the expiration of the time stated in the Annexure give the [builder] possession of the Site or sufficient of the Site to enable the [builder] to commence work. If the [proprietor] has not given the [builder] possession of the whole Site, the [proprietor] shall from time to time give the [builder] possession of such further parts of the Site as may be necessary to enable the [builder] to execute the work under the Contract in accordance with the requirements of the Contract.

The Clause goes on to state:

Notwithstanding the provisions of Clause 27.1, if the [builder] is in breach of Clause 21.1 [Proof of Insurance], the [proprietor] may refuse to give the [builder] possession of the Site or any part of the Site until the [builder] has complied with the requirements of Clause 21.1.

With reference to the above, Dorter and Sharkey (1990) claim that this form of contract contains no provision for compensation to the builder. Likewise, it recommends that the most beneficial course of action for the builder would be to claim damages for breach of contract, or alternatively claim an extension of time with delay costs.

Programming And Time

Like the NPWC 3 contract, AS 2124 refers to the issue of time and overall programming. The importance of the builder gaining possession of the site has been discussed previously.
Once possession has been gained, the issue of commencement of work by the builder, and eventually the reaching of practical completion gains priority. Clause 35.1 states that the builder shall commence work within fourteen days of possession of the site, and subsequently complete all work by the Date for Practical Completion as stated in the contract.

It is interesting to note, that under AS 2124, Clause 35.8 provides for a bonus for early practical completion:

If the Date of Practical Completion is earlier than the Date For Practical Completion the [proprietor] shall pay the [builder] the bonus stated in the Annexure for every day after the Date of Practical Completion to and including the Date for Practical Completion.

Extensions Of Time

Extension of time provisions are catered for in the contract under Clause 35.5:

When it becomes evident to the [Builder] that anything, including an act or omission of the [Proprietor], the Superintendent or the [Proprietor's] employees, consultants, other contractors or agents, may delay the work under the Contract, the [Builder] shall promptly notify the Superintendent in writing with details of the possible delay and the cause.

There are various circumstances which allow for the builder to claim an extension of time. These are basically situations which are beyond the builder's control such as industrial conditions, inclement weather, delays caused by the proprietor or superintendent, latent conditions, variations ordered, and/or repudiation or abandonment by a designated or nominated sub-contractor. In this instance, the builder is also required to submit a claim in writing, but it must be submitted no later than twenty-eight days after occurrence of the delay. The superintendent is then required to respond within twenty-eight days of receipt of that notice, providing details of approval or rejection. What this reveals is that there is an obligation under the contract for both the builder and superintendent, to not only provide detailed information to the other party, but also to do so within a specified time frame. With respect to the superintendent, failure to do so can result in the builder obtaining judgement
by default, and according to Dorter and Sharkey, (1990, p.4590), 'the [builder] can also pursue his alleged entitlement to time and add a claim for damages'.

**Prolongation Costs**

Dorter and Sharkey (1990, p.4661) states that in the case of delays, builders will inevitably want to be compensated for the costs associated with those delays, but:

*Generally, the [builder] cannot obtain that monetary compensation for delays under the guise of a variations claim because the latter is properly restricted to variations to the works, or work, under the contract, as distinct from the [builder's] programme for constructing the works. There is a practice by some superintendents of attempting to combine a claim procedure for delay costs with a claim for variations, but it is generally not wise...*

*The four major building contracts [including AS 2124] recognise the desirability of treating delay costs separately from variations. Provided that a [builder] observes the conditions precedent set out in the contracts, and provided that he brings his claims within the appropriate concepts of, respectively, "costs", "expense", "loss" or "damages", he can still recover many items - both intra and extra the contract. The courts have upheld, to take just a few illustrations, increased requirements of statutory authorities, acceleration costs, and rise and fall not otherwise recoverable under the rise and fall clause itself.*

**Liquidated Damages**

A description of the concept of "liquidated damages" was given previously under the section dealing with the NPWC 3 contract. Like the NPWC 3 contract, AS 2124, makes no provision for the issue of a notice or certificate by the contract administrator for liquidated damages.

According to Dorter and Sharkey (1990, p.4748), AS 2124 'expressly creates a mandatory debt for liquidated damages, thereby semble not leaving available the normal common law right of unliquidated damages'.
Defects Liability Period

Clause 37 of the contract covers the issue of the defects liability period. It states the defects liability period comes into effect on the same day as practical completion is effected. There is a requirement for the builder to rectify any defects ‘as soon as possible’ after practical completion. However, under Clause 2, “practical completion” is defined as ‘that stage in the execution of the work under the Contract when...the Works are complete except for minor omissions and minor defects...’. It is claimed (Dorter and Sharkey, 1990, p.5584) it:

...thereby wrongly leaves a wider power in the superintendent than the proper limit in the authority given by the definition of “Practical Completion”, viz in AS 2124 the omission also being restricted to “minor omissions”.

In the case of AS 2124, if a defect is neither rectified nor involves monetary adjustment, the cost can be taken into account in the next payment certificate. There is also another paragraph which relates to any additional remedial work (Clause 37):

At any time prior to the 14th day after the expiration of the Defects Liability Period, the Superintendent may direct the [builder] to rectify any omission or defect in the work under the Contract which exists at Practical Completion or becomes apparent prior to the expiration of the Defects Liability Period.

Variations

Clause 40.1 expressly provides for variations to the work. It is interesting to note that the first clause merely states ‘...as directed by the Superintendent...', and that under the conditions of the contract, a direction can be given orally provided that it is confirmed in writing as soon as practicable. However, Dorter and Sharkey (1990, p.3542) warns that:

...a serious question arises as to whether the [proprietor] is adequately protected; especially from [builders’] astute claims which are no longer simply for a variation (to be valued under clause 40.2) but, quite dramatically, on a quantum meruit or restitutionary basis.

In accordance with Clause 23 of the contract, the builder is not obliged to execute any request
until written confirmation of the direction has been received. However, the builder will only be excused from such obligation if confirmation was sought from the superintendent by way of written request.

Under Clause 40.1, the builder is only bound to execute a variation that is 'within the general scope of the Contract'. Dorter and Sharkey (1990, p.4112) claim that '[few] provisions of this form are as likely to give rise to debate as this particular limitation on the power to order variations'. Likewise, the phrase 'directed after Practical Completion' is considered to have a further limitation:

'It is only in relation to the variations arising from rectification work carried out pursuant to the [builder's] obligation under cl 37 [Defects Liability] that the employer's power will extend once practical completion has been achieved.'

The valuation of variations is covered by Clause 40.2. The clause provides for several situations to apply with regard to determining that valuation:

(a) If the contract prescribes specific rates or prices to be applied in determining the value, those rates or prices shall be used.

(b) If Clause 40.2(a) does not apply, the rates or prices in a Priced Bill of Quantities or Schedule of Rates shall be used to the extent that it is reasonable to use them.

(c) To the extent that neither Clause 40.2(a) or 40.2(b) apply, reasonable rates or prices shall be used.

Dorter and Sharkey (1990, p.4113) argue that care should be taken with these alternatives since:

By cl [40.2](c), reasonable rates and prices are to be used where neither cl 40.2(a) nor cl 40.2(b) applies and the latter, which deals with rates or prices in a priced bill or schedule, can only be invoked "to the extent that it is reasonable to use" such rates or prices. Obviously, if reasonable rates or prices differ from those in a priced bill or schedule, then it will be said by the [builder] to be unreasonable to use the bill or schedule rates for that very reason.
Unlike the NPWC 3 contract, AS 2124 expressly limits the directing of variations to (Clause 40.1):

\[
\text{The [builder] shall not be bound to execute a variation directed after Practical Completion unless the variation is in respect of rectification work referred to in Clause 37.}
\]

Certificates

Clause 42.1 covers generalities associated with claims and certificates, and reads in part:

\[
\text{...the [builder] shall deliver to the Superintendent claims for payment supported by evidence of the amount due to the [builder] and such information as the Superintendent may reasonably require. Claims for payment shall include all amounts then due to the [builder] under the Contract or for breach thereof.}
\]

With regard to the final certificate, lodgement with the superintendent is mandatory. There are also strict conditions which apply to the period of lodgement (Clause 42.7):

\[
\text{Within 28 days after the expiration of the Defects Liability Period, or where there is more than one, the last to expire, the [builder] shall lodge with the Superintendent a final payment claim and endorse it 'Final Payment Claim'.}
\]

\[
\text{The [builder] shall include in that claim all moneys which the [builder] considers to be due from the [proprietor] under or arising out of the Contract or any alleged breach thereof.}
\]

\[
\text{After the expiration of the period for lodging a final payment claim any claim which the [builder] should have made against the [proprietor] and has not made shall be barred.}
\]

It is claimed (Dorter and Sharkey, 1990, p.6561) that the above clause 'grossly favours' the proprietor since:

\[
\text{The drafting lacks the common construction contract provision present in virtually every other major, standard construction contract; viz the discharge and release for the [builder]; let alone a reciprocal bar such as that which is given to the [proprietor]...}
\]
Dorter and Sharkey (1990) claim that there is no provision under Clause 42.8 Final Payment Certificate for the superintendent to initiate a certificate despite the fact that the builder may not have lodged a payment claim. This is true with respect to this particular clause. However, upon inspection of Clause 42.1 Payment Claims, Payment Certificates and Time for Payment, there is a sentence which reads: 'If the [builder] fails to make a claim for payment, the Superintendent may nevertheless issue a payment certificate'. There is little doubt that the existence of this condition could be argued to also apply to the situation of final certificates, if not in express terms, then at least in implied terms.

Retention And Security

AS 2124 expressly provides for performance security (Clause 5.1):

"Security, retention moneys and performance undertakings are for the purpose of ensuring the due and proper performance of the Contract."

The contract allows for either or indeed both parties to provide security. This is evident from Clause 5.2:

"If it is provided in the Annexure that a party shall provide security then the party shall provide security in the amount stated in the Annexure and in accordance with this clause."

From the above statement, one would normally assume that security would be provided by the builder. This is generally the case, however, developments within the Australian building industry over recent years have led to situations where the builders are requiring security from proprietors - security covering payment of contract sum due - provided that they have met their obligations under the contract. This is particularly relevant when dealing with large projects and/or projects requiring finance from some external financing authority (Dorter and Sharkey, 1990).

The AS 2124 form of contract, like NPWC 3, provides significant advantages for the
proprietor in respect of "pulling the guarantees" (refer previous section on NPWC 3 contract). With respect to retention moneys, Dorter and Sharkey (1990, p.5162) state:

AS 2124 entitles the [proprietor] to withhold from progress payments those percentages of the different items specified in the Annexure until the withholdings reach the level specified in the Annexure.

and

AS 2124 offers the parties a choice between a party entitled to retention holding it and thereby owning the interest thereon or, on the other hand, the parties depositing it in a joint account but in trust until a party becomes entitled to them.

**Determination And Default**

Clause 44 Default or Insolvency generally covers the default or insolvency of both the proprietor and the builder. Clause 44.2 covers default by the builder specifically. Dorter and Sharkey (1990, p.6053) explain that:

The object of the clause is to specify the events which will create an entitlement in the [proprietor] to effect a forfeiture. It is accordingly regrettable that a clause having such serious consequences should have its operation conditioned upon as vague a concept as "substantial breach of contract"...The clause specifies matters which the concept of "substantial breach" is deemed to include, but the specification is not exhaustive.

Clause 44.4 covers the rights of the proprietor, and requires the builder to show reasonable cause why the rights of the proprietor should not be exercised in choosing to cancel or determine the contract or, alternatively, remove the works (whole or part) from the control of the original builder. While it may possibly be advantageous for a proprietor to remove control of the works in part only, there are also potential problems with regard to possession of the site and a unified construction programme.

Clause 44.10 is concerned with the rights of the parties on termination and reads in part:
If the Contract is terminated under Clause 44.4(b) or Clause 44.9 the rights and liabilities of the parties shall be the same as they would be at common law if the defaulting party had wrongfully repudiated the Contract and the other party had elected to treat the Contract as at an end and recover damages.

With respect to the above, Dorter and Sharkey (1990, p.6056) warn:

From the point of view of the [proprietor], the provisions of cl 44.10 would seem to be less beneficial than those of other standard forms: compare NPWC 3, subcl 44.6...The common law will not give the [proprietor] either the right that is granted to the [proprietor] by cl 44.9 in a cl 44.4(a) situation to use the [builder’s] plant and equipment or any general right of forfeiture. The consideration is one which ought be borne in mind by [proprietors] contemplating a cl 44.4 election.

Disputes And Claims

It can be claimed that without disputes and claims, contracts would never be tested, and indeed, might never be needed. It can, therefore, be argued that they are, after all, merely a means of recording a set of promises based on the acceptance of an offer, with inherent obligations including a consideration. Each standard building contract in use today makes provision for the emergence of claims and disputes. AS 2124 is no exception to the rule.

Clause 46.1 provides for any disputes arising between the proprietor and the builder to be directed in writing to the superintendent in the first instance:

If a dispute between the [Builder] and the [Proprietor] arises out of or in connection with the Contract including a dispute concerning rectification or frustration of the Contract -

(a) Each party shall furnish in writing to the Superintendent details of that party’s claim or, where the other party is the claimant, the reasons for rejecting the other party’s claim, and shall request the Superintendent to make a decision under Clause 46.

(b) Within 28 days after receipt from each party of the information referred to in Clause 46.1(a), the Superintendent shall give each party a written decision on the dispute.

Failure to resolve the dispute to the satisfaction of either or both parties, will result in progression to arbitration proceedings. Issues associated with arbitration are covered by Clause 46.2 of the contract.
5.3.3 JCC Contract

The JCC contract (Joint Contracts Committee Building Works Contract, 1985) is a lump sum contract and was developed by a joint committee of representatives from the Royal Australian Institute of Architects (RAIA), the Master Builders' Federation of Australia Inc (MBA) and the Building Owners and Managers Association of Australia Ltd (BOMA). Its original intention was to replace two other standard contracts, namely E5b and MBW 1 which, to some extent, it has done.

Inherent in its conception was a desire for the contract to be a document which did not disproportionately favour any one party, and at the same time set about to share risk and responsibility. The contract provides for sharing between the parties in areas such as costs of delays. Provision is also made for agreement on builder's allowances (for profit and overhead) on variations, the ability of the proprietor to pay nominated sub-contractors directly and offers a choice of insurance options. It should also be noted that while the final certificate is considered "evidence" that the builder's responsibilities have been completed (with the exception of fraud, latent defects and arithmetical errors), it is not "conclusive evidence" as was the case under an E5b contract.

There are two versions of the JCC contract. The first is known as JCC-A, and includes a bill of quantities as part of the contractual document. The second is known as JCC-B and this version does not include a bill of quantities as a formal contract document. A situation may exist, however, where a JCC-B contract is used in conjunction with a bill, but in this case, the bill is not a formal document, but rather serves the purpose of assisting in the pricing of variations. The JCC form of contract is recommended (by its authors) for use in medium to large projects.
(a) **CONTRACT PROVISIONS**

The following discussion concerns itself with and is limited to some of the more notable provisions in the JCC contract.

**Architect**

Unlike the NPWC 3 and AS 2124 contracts, the JCC contract expressly includes the provision of an architect to act as agent to the proprietor, with express rights of authority, and to also act in the capacity of assessor, valuer and certifier. Under this contract, the architect can broadly be described as the "contract administrator". The role of a contract administrator is defined by Dorter and Sharkey (1990, p.3512) as:

>...an invidious and almost impossible one. Apart from these duties to both [proprietor] and [builder], he has a duty to the achievement of the contractual aim. Although the [proprietor] and the [builder] are supposed to be co-operating in that achievement, in practice they are very soon evidencing their competing commercial concerns. Yet he is required to try to hold the balance between these contenders.

Although in some instances this particular viewpoint can be substantiated, it can alternately be argued that a professional, such as an architect, who is required to practice with a duty of care and under specific professional and ethical guidelines and requirements, will perform that task without prejudice or bias, and in accordance with the responsibilities as set out in the contract. That is, while there is an express role of acting as agent to the proprietor (Clause 5.01), there is also a requirement for the architect to consider the rights of the builder and, should the situation arise, convey those rights and entitlements to the proprietor.

In JCC, unlike NPWC 3 or AS 2124, there exists a provision for the builder to raise reasonable objection to the proprietor's replacement of an architect (Clause 5.07.02):

>...appoint another architect selected by him as the Architect, having first ascertained
by enquiring of the Builder that he has no reasonable objection to the appointment of the other architect...

In this regard, Dorter and Sharkey (1990, p.3515) elaborate:

...grounds of reasonable objection include not only the lack of qualifications and ability that is necessary for the discharge of the role...but also the statutory regulation of the practice of architecture. The various States protect the trusting consumer public from unqualified malpractice with legislation prohibiting unqualified persons from "holding out" that they are qualified or entitled to registration as a practitioner.

The architect's authority is detailed in Clause 5.02. The list provided is quite exhaustive, but in essence there is provision for the architect to issue to the builder instructions in respect of a number of matters; to issue the builder copies of documents and furnish setting-out information; the architect is authorised to act as assessor, valuer or certifier in respect of a number of matters; and any decision made by the architect in respect of assessments, valuations or certification, may be referred to arbitration by the disagreeing party. It should be noted (Dorter and Sharkey, 1990, p.3519) that under Clause 5.02.02, the 'agency role [should] be distinguished from the architect's role as certifier...'.

Dorter and Sharkey (1990, p.3602) state: 'Clarity, certainty, identification and evidence are always desirable in the good, due and proper administration of a construction contract', and with respect to JCC go on to add:

Any instruction, or the notice which the architect is to give, must be in writing (and promptly). Furthermore it must include, or be supported by, a statement as to the particular provision of the contract pursuant to which it is given, either whenever appropriate or when requested by the [builder]. If the [builder] wishes to exploit an instruction in that it is allegedly given in error or actually involves a variation, the onus is upon the [builder] promptly to notify the architect in writing.

Possession Of The Site

JCC defines "The Site" under Clause 1.06.06:
The lands and other places to be made available by the Proprietor to the Builder for the purposes of this Agreement and as more specifically defined in the Drawings and/or Specification.

Possession of the site is covered by Clause 3.04. Essentially, the builder gains legal possession of the site upon the proprietor making it available. The builder is required to carry out 'his obligations under this Agreement until Practical Completion of the Works or until the Proprietor takes possession of the Works, whichever is the earlier'. Dorter and Sharkey (1990, p.2132) raise a point of conjecture with regard to this clause:

Such a phrase invites an argument that the [builder] has been given at law more than the normal licence, but the better opinion is that such an argument will not succeed because of the fact that such legal possession is expressly subject to the access for the numerous and various other persons provided for in cl 3.06 [the architect and others] and 3.07 [separate contractors].

Possession of the site brings with it responsibilities as to the accurate setting out of the works, and more fundamentally, assurance that work is executed on the correct site. Provision of accurate site information, including survey or other information, is a responsibility of the proprietor under Clause 3.01. Clauses 3.02 and 6.07, however, stipulate the procedures which need to be undertaken if discrepancies exist. Dorter and Sharkey (1990, p.2135) explain that:

Errors or inadequacies in the information supplied are not the [builder's] responsibility if he immediately notifies the architect in writing and seeks the architect's instructions. Otherwise, he is responsible for errors arising from his own inaccurate setting out and establishment of levels, and he must bear the cost of correction... Any check or examination by the architect does not relieve him of the latter responsibility.

There is also a requirement, under Clause 6.07.04, that the builder submit to the architect a certificate from a licensed surveyor certifying that the works are set out correctly and to the correct levels. In some instances, a builder may require to gain access to an adjoining site in order to perform his obligations under the contract. If this situation arises, it is the proprietor's responsibility to obtain the necessary approvals, and this is provided for in Clause 3.08.
Programming And Time

Clauses 1.02 and 1.03 respectively provide for the builder's and proprietor's obligations under the contract. Inclusive in these is a requirement that the proprietor give the builder possession of the site by the agreed date, and that the builder execute the work by the Date for Practical Completion. Apparently, in an effort to negate argument, JCC under Clause 9.13, actually stipulates how days will be counted:

9.13.01 Any notice certificate or instruction is to be given or any negotiations commenced or any payment or release of security made or authorised or any default remedied in a stated period of days then the following days shall not be counted, namely: Saturdays, Sundays, Statutory or Public Holidays.

9.13.02 Any work including work involved in making good is to be carried out within a stated period of days or any allowance of time stated in days is made for any delay in progress of the Works then the stated number of days shall exclude Statutory and Public Holidays and include only those week days which are stated in Item G of the Appendix as working days.

Practical Completion

Both NPWC 3 and AS 2124 could be considered to be somewhat lacking in their definitions of "practical completion". At the very least, there is some ambiguity as to at what time the builder's responsibilities under the contract cease. JCC has attempted to overcome that problem. Under Clause 9.09 a clear definition exists regarding the interpretation of the date for "practical completion" and the procedures which must be implemented if it is considered that practical completion has been achieved. There are certain responsibilities which apply to both the architect and the builder with respect to these procedures, and in each case there is a requirement for the giving of written notice within a specified time frame. Failure by one party to abide by the time frame can result in the other party being entitled to recourse.

Clause 9.09.05 makes provision for the architect to issue a Notice of Practical Completion if, in his/her opinion, the works have reached practical completion, even if the builder has not sent a formal notification. Once a Notice of Practical completion is issued by the
architect, the proprietor 'shall be entitled to take possession of the Site and of the Works’ (Clause 9.09.06).

The JCC contract, under Clause 9.10, also makes provision for occupation before practical completion. Depending on the manner in which occupation has taken place, the builder may automatically be granted a Notice of Practical Completion since the works have been deemed to be “practically complete” (Clause 9.10.04):

If the Proprietor occupies and/or uses the Works or part thereof prior to Practical Completion in the absence of any such agreement and Notice [Notice of Occupancy] or of other written agreement between the Proprietor and the Builder then the whole of the Works shall be deemed to have reached Practical Completion on the date of commencement of such occupancy and/or use.

Extensions Of Time

JCC requires that, in the case of an extension of time being claimed, the builder is to notify the architect of the circumstances (Clause 9.01):

If progress of the Works is delayed by any cause or causes beyond the control of the Builder including any act (other than any instruction by the Architect as to a Variation) default or omission on the part of the Proprietor, the Architect, any Separate Contractor, employee or agent of the Proprietor in a manner which might reasonably be expected to result in a delay in the Works reaching Practical Completion the Builder shall, if he desires to claim an extension of time for Practical Completion of the Works, as soon as practicable and in any event not later than twenty (20) days after the cause of the delay arose give a notice in writing to the Architect stating the nature, the cause and, where possible, the extent of the delay.

In addition to the above, Clause 9.06 expressly provides for conditions precedent to an extension of time claim and places a certain amount of responsibility on the builder to ensure that extension of time claims are not encouraged or promoted:

Notwithstanding the preceding provisions of this Section 9 the Builder shall not be entitled to any extension of time unless he shall have taken proper and reasonable steps both to preclude the occurrence of the cause of delay and/or to avoid or minimise the consequences thereof.
Prolongation Costs

Clause 10.09 provides for the builder to claim costs for damages sustained for delays due to the proprietor's default, while Clause 10.10 provides for the builder to be entitled to claim any costs and expenses incurred for delays which were beyond that party's control. Dorter and Sharkey (1990, p.4665) claim that:

There is considerable significance in JCC's distinction between the [builder's] right to the wider concept of damages for grounds attributable to the [proprietor] or the architect and, on the other hand, reimbursement for only costs and expenses incurred because of other grounds...

Dorter and Sharkey 1990, p.4667) go on to caution:

Whether the [builder] be operating under JCC or E5b, he must give the required notices for each delay. Under JCC, he will need to think seriously about severing his delay which is causing damages from any delay causing costs and expenses, because one can readily destroy the other if he cannot make such a severance...

Liquidated Damages

Clause 10.14 covers liquidated and ascertained damages, and sets out procedures to follow if the builder fails to bring the works to practical completion by the Date for Practical Completion. Dorter and Sharkey (1990, p.4749) refer to the case of Temloc Ltd v Errill Properties Ltd (1987) where the judge inter alia concluded:

...the function of JCC cl 10.14 is to enable the proprietor, if he so desires, to cause the architect as his agent to invoke the machinery whereby liquidated damages can be assessed but, if the proprietor or the architect does not do so, then the proprietor is entitled to rely upon his common law right to damages for breach of contract...JCC cl 10.14 is neither an exhaustive agreement as to the damages for delay nor does it constitute a limitation of damages...

Clause 10.14 provides that the architect may give notice to the builder that practical completion ought to be been achieved in accordance with the contract. Dorter and Sharkey (1990, p.4750) state that:
The certifier's duties to produce a certificate in accordance with the relevant clause, in form, substance and intent apply as much as ever to this certificate with its serious connotations...A certificate signed but held back may well satisfy the form and substance but it will not satisfy the intent...

A certificate from the contract administrator denying the claim for loss or damage must be clear and unambiguous...

There is a practice of some architects going further and actually deducting that amount of liquidated damages from their next certificate. The practice is wrong. The contract administrator can be liable to the [builder] in negligence on such inadequacies, although it will not be a breach of the contract by the [proprietor]...It is for the proprietor himself to take the bit between his teeth in actually deducting them, as distinct from the "in terrorem" tactic during the administration of the contract. JCC contains a very useful compromise, which in practice provides a sensible solution to what is usually otherwise a "Mexican standoff" between the architect's mere threatening of liquidated damages and the builder calling his bluff until the proprietor actually levies the damages...

**Defects Liability Period**

Clause 9.11 provides for the defects liability period taking effect as of the date on which the works reached (or were deemed to have reached) practical completion, while Clause 6.11 covers the making good of defects during that defects period. The latter clause provides for a second defects period to be established, thereby effectively extending the first one. Depending on the circumstances, it may be more beneficial to all parties to bring this second defects liability period into effect than to enter into a dispute regarding the compliance or non-compliance with directions and obligations under the contract. The JCC contract also provides 'for the cost incurred by the [proprietor] in rectifying the defects to be a debt due...'

(Dorter and Sharkey, 1990, p.5584).

**Variations**

Variations are provided for under Clauses 6.10 and 10.29 of the contract. Dorter and Sharkey (1990, p.2072) claim that:

*Although JCC does give the [builder] express right to a variation (cl 10.29), the [builder] in such a situation who receives a relevant instruction which does not itself*
state that it involves a variation, is wise then promptly to give written notification to the architect that a variation is involved...

Under Clause 10.18, the builder is entitled to claim extra moneys for what is essentially overheads and profit. This, however, is not the case under Clause 10.17 when a bill of quantities is used in the pricing because it does not expressly allow for costs associated with overhead and profit.

The JCC contract does not allow for variations to be ordered after practical completion. Consequently, if a variation is ordered before practical completion, but the execution thereof extends beyond the Date for Practical Completion, the architect may be required to approve or grant an extension of time. Clause 9.07 makes provision for this situation. This essentially means that a variation instruction/order may have monetary as well as time adjustments (Clause 6.10). The architect's power to give instructions with respect of variations is covered by Clause 5.02. In all but cases of urgency, the architect is required to provide written instructions to the builder prior to the commencement of any work associated with that instruction, and the builder is not obliged to carry out that work until the written instruction is received. Likewise there is a requirement for the builder (Clause 10.16) to submit a price to the architect for the variation, and no work shall be started until the price has been duly accepted or agreed upon.

Certificates

Section 11 of the contract covers matters associated with the final certificate and final payment. The builder is required, under Clause 11.01, to organise the following:

Within one hundred and twenty (120) days of the date of issue of the Notice of Practical Completion or the date of deemed Practical Completion... the Builder shall submit to the Architect a detailed statement showing all the then ascertainable adjustments to the Contract Sum.

Subsequent to the above, the architect is compelled to issue a final certificate within a period
of fifteen days from receipt of the builder's final claim. The architect is, however, entitled (under Clause 11.03) to request in writing further information to substantiate the claim. In this case, the architect must make such request within a time period of ten days from receipt of the original claim.

The architect is also empowered to initiate the final certificate even if the builder has not started the process by submitting a final claim. However, if this course of action is taken, the architect must first notify the builder that he/she intends to take such action, and allow the builder a period of twenty days in which to submit a claim.

Dorter and Sharkey (1990, p.6542) state that:

\[ JCC \text{ has the further, flexible intermediate step of allowing the [builder] to apply for a semi-final certificate where the only unsatisfied condition disqualifying him is the unexpired second defects liability period on special items in the works...} \]

Under the JCC contract, failure to issue or pay a final certificate, like failure to issue or pay a progress certificate, can result in interest being due and payable to the builder. Dorter and Sharkey (1990, p.6592) explain:

\[ \text{Under JCC, failure to make due final payment as from the fifteenth day after presentation of the final certificate carries interest at the agreed rate in the Appendix, subject to the extension of that 15 days where the builder holds the certificate for more than one day before presenting it.} \]

\*[Retention And Security]

Under Clause 10.21 of JCC, the builder is required to provide security either in the form of a bank guarantee or as retention moneys.

In the case of Clause 10.25 (Availability of Security), it is claimed (Dorter and Sharkey, 1990, p.5153) that 'JCC provides] very wide rights of recourse in respect of moneys due by way of set-off and, if the set-off overtops, against the security...':
Any security provided by the Builder in terms of this Agreement shall be available to
the Proprietor whenever the Proprietor may be entitled to the payment of moneys by
the Builder under or in consequence of this Agreement or whenever the Proprietor
may be entitled to reimbursement of any moneys paid to others under this Agreement,
in all such cases as if the security were a sum of money due or to become due to the
Builder by the Proprietor.

In the case of retention moneys, Clause 10.23 defines the amount, in percentage form, that
can be retained from each of the builder’s progress payments, together with how that money
is to be held during the course of the contract, and rights available if there is a default by
either party. The most interesting thing to note here is that the moneys retained are held in a
joint account, in the names of the proprietor and the builder.

At practical completion, the contract, under Clause 10.24, provides for the architect to
issue a “special” progress certificate. This certificate is for an amount equal to half the
retention money held, plus all interest accrued on that joint account. If, on the other hand,
security is in the form of a bank guarantee, then half that security is released. It should be
noted, that there are time limitations imposed on the payment of partial releases of retention
moneys or other security.

Determination And Default

Section 12 covers “determination” of the contract. Clause 12.01 provides for all the
circumstances under which the builder may be deemed to have defaulted. These include such
things as wholly suspending the works, without reasonable cause, prior to practical
completion; failure to proceed with the works ‘regularly and diligently’; failure to proceed
with the works in ‘a competent manner’; or failure to comply with written architect’s
instructions; or in ‘substantial breach’ of contract. In respect of the latter condition, Dorter
and Sharkey (1990, p.6086) comment:

Just what is a “substantial breach” in the context of the contract awaits judicial
determination, although it is conceived that it could be constituted by, for example,
such matters as the failure to effect the insurances required...or to provide the
security required...
Clause 12.02 provides for the proprietor to determine the builder’s employment.

Essentially, the builder is entitled to a period of ten days in which to remedy a default. However, failure to remedy can, in turn, entitle the proprietor to send, after a further period of ten days, a written notice by certified mail, determining the builder’s employment.

Clause 12.04 concerns itself with determination by the proprietor in the case of the builder’s de-registration. It should be noted that this condition only applies in States where registration of a builder or building company is a requirement under legislation.

Clause 12.09 relates to determination arising from loss or damage, and makes provision for determination from such an outcome. Dorter and Sharkey (1990, p.6087) claim:

Clause 12.09 is, on any view, an extraordinary provision. By the clause, either party is entitled to give notice of the determination of the agreement. The event upon which the right to give the notice of determination is conditioned is the occurrence of "any loss or damage affecting the Works". The right is expressed to be subject to the right of the other party to arbitration by referring, pursuant to s 13 within 15 days after receipt of a relevant notice, the question of whether such determination would be just and equitable in the circumstances. The arbitrator’s function is limited to answering yes or no to the question of whether the determination would be just and equitable, having regard to the matters specified. If he answers the question in the affirmative, the provisions of para 12.08.02 become applicable to calculate the amount payable to the builder.

The builder can also determine the contract, and this is provided for under Clause 12.06. There are several conditions which apply. These include failure by the proprietor to pay a progress certificate, or the bankruptcy or liquidation of the proprietor.

**Disputes And Claims**

With regard to the matter of disputes and claims, a description of the provisions is best summarised by Dorter and Sharkey (1990, p.7148/7149):

This contract has a simpler and better disputes procedure than AS 2124 or NPWC 3. Its concept is more consistent with the rights of parties who have been allowed freely to negotiate their contract in the first place. The procedural steps are as follows.
1. The dissatisfied party with a dispute or difference, whether pursuant to a decision on a claim or otherwise, must pay a $500 deposit to the Secretary of the Master Builders' Association or the Royal Australian Institute of Architects in the State or Territory where the site is.

2. He gives to the other party written notice, either by certified mail or by hand, which sufficiently identifies that dispute or difference. With that notice he must also give evidence that he has paid the deposit: the usual and best way is a photocopy of the receipt...experience shows that many claimants do not at this stage know precisely what they really are claiming. Accordingly, it is tactically wise to reserve some flexibility; especially because the power of enlargement under cl 13.06 is discretionary and is subject to costs.

The following two forms of contract are dealt with briefly and a summary of their nature is provided. They have not been afforded the same consideration as the preceding forms for the reasons as outlined in Section 5.3 of this chapter.

5.3.4 SBW2 Contract

The SBW 2 contract is a development of the SBW 1 contract. SBW 2 (Lump Sum Contract for Simple Building Works, Edition 2, 1992) is a lump sum contract which is intended for use on simple building works projects, and was first approved in December, 1990. By definition, simple building works also includes alterations. The contract was formulated by collaboration between the R.A.I.A. and the Master Builders' Construction & Housing Association, Australia Inc. The parties to the contract are, like JCC, the proprietor and the builder with the architect as contract administrator.

5.3.5 E5b Contract

Cooke (1989) states that the E5b (Lump Sum Contract Edition 5b) contract was constituted as a result of joint collaboration between the Royal Australian Institute of Architects (R.A.I.A.) and the Master Builders' Federation of Australia Inc (M.B.A.). Until 1978, it was the only R.A.I.A. lump sum form designed for use on major works. In this form of contract, the parties to that contract are the proprietor and the builder, with the architect being involved as contract administrator. The bill of quantities does not form a part of the contract
Cooke (1989) goes on to add that the E5b contract contains a major weakness with respect to the architect and the proprietor. This weakness relates to the apparent immunity that is provided to the builder in relation to latent defects that may be discovered after the issue of the final certificate. Cooke (1989, p.207) explains:

...the issue of the final certificate is conclusive evidence in any proceedings that (in the absence of fraud, dishonesty or fraudulent concealment by the builder) that work has been completed in accordance with the terms of the contract to the reasonable satisfaction of the architect. It is not to the proprietor's advantage to agree in this way to relieve the builder of liability for defective work and it is certainly not to the architect's advantage. The decisions in Sutcliffe v. Thackrah [1974] A.C. 727 and Arenson v. Arenson [1977] A.C. 405 denying certifiers and valuers the immunity from legal action enjoyed by arbitrators make [this contract] potentially damaging to a contract administrator whose periodic inspections of the work may have failed to bring to light a defect which "reasonable inspection" would have disclosed. Merely being able to see the defect at the time of making an inspection is not an automatically successful defence...

Cooke (1989) claims that as a result of the rather volatile industrial climate of the Australian building industry in the 1970's, together with restrictions on finance availability, a number of major construction companies collapsed. This placed even greater pressure on the progress of developments and costs associated therewith. Needless to say, contracts came into question, and a number of issues were raised. These concerned such things as payments to nominated sub-contractors, builder's "mark-up" on provisional sum items, valuation of variation claims, extension of time claims, and claims for reimbursement of loss or expense incurred due to delays.

In 1978, the MBW 1 contract (Major Building Works Contract) was developed as a result of collaboration of the R.A.I.A., the M.B.A. and the Building Owners and Managers Association of Australia Ltd (B.O.M.A.). This form of contract tried to address the main issues encountered by the E5b contract, and has since been superseded. In 1985, a further development was the formulation of the JCC contracts, as discussed previously in this chapter.
The E5b contract is not frequently chosen today by architects or proprietors, since the more recent contractual developments such as the JCC contract are more advantageous to these parties. Some builders do, however, prefer its use, essentially because of clauses such as those associated with the issue of the final certificate and its inherent implications.

5.4 SUMMARY

This chapter summarised the principal points of difference of the three most commonly used forms of standard building contract in Australia. Discussion has also centred around aspects of three of these forms of contract which are of particular concern to some of the issues being discussed in this thesis, namely, the issues which most often lead to legal action, conjecture, or at the very least debate and argument. While this chapter may seem somewhat removed from the thesis topic which relates to “alternative” forms of building contract, there is nonetheless a fundamental need to discuss these standard contracts. This need arises from the fact that many of the so-called “new”, or “home grown” contracts developed over recent years, have actually been based on these standard forms of contract. It is, therefore, considered inappropriate to discuss the new or amended forms of contract without first assessing the basis of their existence. The next two chapters expand on this viewpoint.
Chapter 6: THE TREND TOWARDS 'HOME GROWN' CONTRACTS

This chapter deals with some of the major influences upon the Australian building industry which, over the last twenty years, have resulted in a digression from the traditional forms of project delivery and contracting systems. Due to inherent changes in methods, operations and attitudes within the industry the roles, responsibilities and expectations of the participants have altered. This chapter provides general discussion of the changes while Chapters 7 and 8 encompass more specific detail of the systems and contractual arrangements.

6.1 CHANGES WITHIN THE AUSTRALIAN BUILDING INDUSTRY

A characteristic of the Australian building industry is its constant state of change. It must be capable of change in order to satisfy its diverse structure in order to meet fluctuations in demand, supply and other market forces. Some of these variables include (Noakes, The Building Economist, September 1981):

- ...different sectors with frequently diverging and competing interests;
- a geographical spread which makes co-ordination difficult;
- impermanence and instability of employment;
- identifiable differences in each building project;
- a high degree of craft specialisation;
- a high degree of sub-contracting;
- a large number of employer organisations and trade unions, many with competing interests.

The discussion which follows deals with the more significant influences upon the Australian building industry including national, state and local economics, political strategies and policies, and industrial climate. It is considered on a decade by decade basis in keeping with
the context and parameters of this thesis.

6.1.1 The 1970's

(a) POLITICAL AND INDUSTRIAL INFLUENCES

The 1970's was a period, in political terms, of significant change. The population, in general, was beginning to lose its conservative attitude towards many issues. An example of this is the reluctance of a major portion of the community to accept, without question, this country's involvement in external matters such as the Vietnam war. Although it may appear that this has little to do with contracts, the political issues are often the aspects which influence common patterns of thinking, debate and acceptance within the wider community. What was emerging at the time was a trend for the population to not blindly accept whatever the government of the day decreed. Issues that had an influence, whether minor or major, whether based on factual information or moral principles were being questioned. The status quo had been surpassed, and the basis had been set to continue this freedom of enquiry.

Consumer awareness, in its broadest context, was developing.

This ability to question and demand spread to all sectors of the community. An example of this is the public unrest and demonstrations which occurred as a result of the so-called "green bans". Protests arose when the Sydney Council of the day decided to evict people from their homes, in an effort to regain the land for redevelopment. One area which was significantly affected was Paddington, although other districts suffered the same fate. Mr. Jack Mundy of the Builders' Labourers Federation (BLF) organised the union to join the protesters in their efforts to halt the evictions and subsequent demolition of properties. This particular union first became involved, many believe, in an effort to display and promote a sense of social conscience - they were fighting for the rights of "the common man" (Noakes, The Building Economist, September, 1991):
The early years of the 1970s were notable for the campaigns conducted by the Builders' Labourers' Federation in New South Wales in the name of protection of the environment. These industrial/political campaigns had consequences, which, while devastating enough at the time, the industry is still living with today. One serious aspect was the introduction of violent and destructive behaviour on ideological grounds.

Some victories were achieved, and through their efforts the union gained acceptance, recognition and power. Power in respect of making demands that were subsequently listened to, not only by other building industry participants such as builders, but also by politicians. One could argue that unions such as these have had a tendency to be "militant" since they first evolved, but at this point in time they were given, and took advantage of, a public forum in which to voice their opinions. As a result, social consciousness soon developed into self interest.

The power of unions generally was increasing, and representative bodies such as the A.C.T.U. were gaining greater influence in political circles. Unions within the building and construction industries and the transport sectors were often the most vocal and militant in their demands and actions. It was inevitable that there was to be great upheaval in the sectors affected by their actions. Attempts were made by employer groups to counter the trend of increasing industrial unrest (Noakes, The Building Economist, September, 1991):

...in the early years of the 1970s pressures developed amongst employers and their organisations for a greater co-ordination of their interests. It was thought that the lack of concerted action by a number of independent and autonomous organisations was the major reason for the industry failing to provide an effective countervailing force to the trade unions in the industry...These pressures resulted in the formation, in mid-1974 of the National Industrial Executive of the Building and Construction Industry...[which] brought together in a formal structure the industrial relations activities of the State Master Builders' Associations and the Australian Federation of Construction Contractors...

With regard to the building industry, "black bans" (i.e. total ban on all work performed, deliveries and so on) which targeted specific sites were becoming more prevalent. While some industrial unrest could be justified, in cases of worker safety for instance, many other strikes could not. The unions involved sometimes had interests which did not centre around
occupational health and safety matters, and in these instances, the agendas were often related to social, political and/or economic issues (e.g. promoting the socialist notion of 'equality').

(b) CHANGES IN THE PROFESSIONS

As was briefly discussed in Chapter 4, the Trade Practices Act 1974 had a major effect upon other sectors of the Australian building industry. One of the more notable areas of influence was that of professional consultancy.

Before the introduction of the Trade Practices Act, bodies such as the Royal Australian Institute of Architects (R.A.I.A.) had their own "scale of charges". Prior to 1974 the R.A.I.A. fee was in the order of six percent minimum for "usual complete architectural services". In 1978 the R.A.I.A. Code of Professional Conduct was amended to (Cooke, 1989, p.126):

...[require] members "to observe and uphold, the Institute's Conditions of Engagement, and Scale of Charges", forbade supplanting or attempting to supplant "another member, partnership or corporation" and prohibited members from competing in or acting as assessors for an architectural competition unless it had been approved by the Institute. Apart from the prohibition on supplanting, all of these traditionally cherished restrictive practices have now been abandoned by the R.A.I.A. and the A.C.E.A. [Association of Consulting Engineers Australia].

Cooke (1989) explains that there was almost a ten year period between the start of the Trade Practices Act of 1974 and the final authorisation of the R.A.I.A.'s submission under s. 88 of the Act by the Trade Practices Commission (T.P.C.). The effects on the architectural profession were the same as those on the engineering profession, and indeed, the R.A.I.A. instigated changes to its rules and polices as a direct result of action being taken against the A.C.E.A. (Cooke, 1989, p.122):

The T.P.C.'s decision came as no surprise. Its attitude to the anti-competitive features of codes of professional conduct and related documents had been indorsed by the Trade Practices Tribunal [T.P.T.] in Re Association of Consulting Engineers (Aust.) (1981) 6 T.P.C. 876. This was the result of an appeal by the A.C.E.A. against the T.P.C.'s refusal to authorise the A.C.E.A.'s Code of Ethics, Scale of Fees and Conduct of Professional Practice. The R.A.I.A. had begun to put its own house in order without waiting for the T.P.T.'s rejection of the A.C.E.A.'s appeal.
Following the R.A.I.A.'s rewriting of its Code of Professional Conduct and Conditions of Engagement, the Trade Practices Commission granted the R.A.I.A. interim authorisation in January 1975. The R.A.I.A. published a Practice Note (PN 17C) in October 1980, which read in part that the R.A.I.A. council had ‘...concluded that a new approach was required taking into account the wide and increasing range of services now offered by architects and the need for greater flexibility in methods of remuneration’. The result of the action taken by the R.A.I.A. was to replace the minimum fee scale with a graph illustrating a range of fee scales which may be appropriate for various building types or classifications. The Code of Professional Conduct did not explicitly specify the scale of fees. The only reference which existed was that members should promote architectural excellence and ensure service and a duty of care commensurate with the remuneration received. Cooke (1989, p.126-127) states that:

Trade Practices Commission Information Circular No. 3, December 1974, had made known the attitude of the Trade Practices Commission to recommended price agreements. The "great majority" if such agreements, it stated, "interfere with the free operation of the competitive market and inevitably act to inhibit or diminish competition. The Commission would ordinarily regard the effect on competition as significant and not issue a clearance. This would be so notwithstanding that -

(i) The price agreement consists of 'recommended' or 'guideline' prices only;

(ii) There is no obligation or undertaking to comply with the recommendations made".

The Trade Practices Tribunal did not accept the A.C.E.A.'s argument that the creation of fully competitive fees would be detrimental to the profession and the quality of services it offered. In fact, it argued to the contrary (Cooke, 1989, p.127) and expressed:

"substantial sympathy for the A.C.E.A.'s case that for most projects consultants should be selected on the basis of merit, using that expression in a broad sense" ((1981) 6 T.P.C. 876 at 915). It recognised that "in the absence of a minimum scale, users, particularly those with substantial financial strength, may impose upon consultants by forcing fees down below a reasonable level" but thought (at 916) that there was little evidence that this would be the case. "Evidence from users in both the public and private sectors is to the effect that it would be detrimental to their own interests to offer fees which did not provide a reasonable return". Such considerations did not sway the T.P.T. The legislation was an expression of the belief of the Australian community "that the consequences of competition, including competition on the basis of price, are largely beneficial"...
Changes to the R.A.I.A.’s Code of Professional Conduct and the A.C.E.A.’s Code of Ethics, included alterations to the conditions associated with competitions. Previously, both organisations precluded members from undertaking work which was of a speculative nature i.e. that did not involve remuneration for work done, unless the project finally proceeded. The A.C.E.A. altered its Code to read that it was “immaterial whether or not the member is aware that other engineers may have been requested to submit proposals, including fee proposals, for the same work” (Cooke, 1989, p.128). The R.A.I.A. amended its Guidelines for R.A.I.A. Endorsed Architectural Competitions to read (Cooke, 1989, p.128) that:

...members are “free to compete in design competitions of any description. However when a promoter seeks R.A.I.A. indorsement of an architectural competition conditions are formulated whereby the Institute’s and the promoter’s prime objectives are met (that is, the advancement of architecture, and the best design solution the profession can offer) but whereby the inordinate call on the time and funds of competing architects is kept to reasonable minima”.

The Trade Practices Act also had an effect on the ability of professional architects and engineers to advertise. Prior to the Act, neither group was allowed to advertise. However, after its implementation, restrictions were removed, provided that they did so in an accurate and honest manner and did not denigrate any colleagues in the process. However, some restrictions still exist in relation to State-based Acts of Parliament (e.g. The Architects Act of South Australia).

(c) PARA-PROFESSIONALS

The changes to the architectural and engineering professions as a result of the Trade Practices Act, created openings in the building industry for a group of para-professionals who were now in a position to offer design services on an independent and/or all-inclusive basis. In the context of this thesis, the term “para-professional” does not mean “assistant” but rather a person who holds an allied qualification, has related experience and/or provides a service to the Australian building industry. These include "building designers" who, unlike architects, hold minimal, if any, qualifications and training. Others who offer design
services include builders and “project managers” who often offer a package deal form of contract. The term “project management” has several definitions. In the context of this thesis, the term is defined (Standen, 1981, p.192) as:

Management of a construction project by a building organisation providing design services as well as construction services. The design services are provided by either in-house staff or by external consultants under the direction of the building organisation... The fact that the design services and construction services are not independent of the project manager usually means that control of these services cannot be impartial...

Under a project management system, the project manager (who may or may not be the constructor), offers an all-inclusive form of project delivery. That is, design, across the range of disciplines necessary; construction; contract administration; co-ordination of participants; and in some cases provision of a suitable site, feasibility study and finance arrangements.

The system of project management gained in popularity for several reasons. The main reason being that building developers felt more comfortable about dealing with one person or organisation, as opposed to a number of organisations and consultants. It was a more convenient solution for developers to deal with one representative on all matters. This avoided often conflicting opinions and advice with respect to various aspects of the project. In many instances, the truth behind such an arrangement was that clients were only told about essential issues, or issues which could not be kept confidential. It was, for instance, often not in the project manager’s interest to reveal information about matters such as faulty design or sub-standard building workmanship and materials. The main objective was to get the project built within a predetermined budget, often to the detriment of final quality.

Architects and other design professionals who were a party to such a method of project delivery, suddenly found themselves in a situation where they no longer controlled the design (either conceptual or detailed). This often led to the design of buildings based exclusively on initial cost, as opposed to specific client needs, long term adaptability, maintenance
reduction or energy efficiency. Life cycle costing was not usually a consideration. Also, because they were effectively engaged by the project manager, they were rarely in a position to criticise quality of construction, or the validity of extra claims for money by the project manager. These design professionals were effectively nothing more than a sub-consultant. In the case of architects in particular, this was often considered to be a rather radical divergence from their traditional role as principal consultant - in a position to direct and co-ordinate other consultants, and attend to the interests and concerns of their client, while at the same time producing a building of design quality within budget constraints. Design quality generally extended beyond meeting the client's needs to creating a worthwhile contribution to the built environment and thus the community.

6.1.2 The 1980's

(a) POLITICAL, INDUSTRIAL AND ECONOMIC INFLUENCES

In times of a downturn in the Australian economy, the building and construction industries are often the first to react and suffer as a consequence. This has an inherent effect upon the industries which support building and construction such as primary and secondary suppliers and manufacturers. The early 1980's saw a change in the Australian national economy and as it declined, so did the influence of the union movement. Many building industry unions saw this reduction in construction activity as a potential threat to their survival.

The downturn in the building and construction sectors was evident throughout most of Australia with, perhaps Queensland being the only significant exception. It was often suggested, by rival politicians, the media and the general community, that Queensland "did not belong" to the rest of Australia, due mainly to its often unorthodox, yet nonetheless effective, methods of government. Throughout all the criticism, Queensland continued to grow. It became, and was promoted as, a good place to go for a holiday, retire, or alternatively set up business. There existed an attitude of "getting on with the job" and
building development was encouraged by a number of methods. These included a planning system which did not provide for third party appeals; State taxation incentives for property developers; a political system which provided for selective development approvals; and an industrial relations policy which was draconian in comparison with the rest of Australia. The combination of all of these factors resulted in significant progress in the building and construction industries. There was also little tolerance of the types of demands that unions were placing on these industries in other states of Australia. This lack of tolerance transgressed the various sectors concerned, namely, the State government, developers, builders and tradespeople. Calls by unions for strikes and black bans were not, generally, upheld.

The building and construction industries cannot be ignored when considering economic growth since (INDECS, 1990, p.238):

On the grounds of size alone the fortunes of the construction industry are important in determining the course of GDP. The industry employs almost 7 per cent of the Australian work force, and accounts for around 6 per cent of national product. Approximately half of that output is in response to private-sector investment demands for new dwellings, other buildings (offices, etc.) and major construction projects (roads, steel mills, etc.). The remainder reflects public-sector demand for similar products (concentrated mainly in the construction category), some three quarters of which is produced by the private sector under government contract.

In the mid to late 1980's, the Australian economy again expanded: 'At the end of the 1980s, the [Australian building] industry was still recording respectable growth rates...' (INDECS, 1990, p.251). The financial sector accommodated increases in spending, and many institutions reduced their restrictions on available funds and the methods associated with the loan of them. Banks and other financial institutions were actively promoting the these loan funds, and the market responded by borrowing. Businesses expanded, both in terms of their own infrastructure and the premises they occupied. The "building boom" had begun.

Developers saw this period in our economic history as one which demanded, and could absorb, a huge increase in building development and, as a result, many new buildings were
constructed. Many developers claimed that with the upturn in the economy, the expansion of existing businesses and the establishment of new ones, the extra floor area created would be sustainable and was, therefore, justifiable. Unfortunately, over-development was not sustainable (INDECS, 1990, p.238):

The last years of the 1990s exhibited a pattern fairly familiar to long-term observers of the construction industry. A boom period of rapid growth was followed by signs of an oversupply of properties and a downturn in activity to lead in the 1990s.

The increase in building and construction created a situation which was ripe for industrial picking. That is, with demand exceeding supply, unions took full advantage of the opportunity to gain any bonuses possible. What resulted was increased industrial action, not only for award wage increases, but also conditions. The outcome of some of these conditions were known as “site allowances”, and could include virtually anything from travel and meal allowances to allowances for literally being able to smell food from adjoining restaurant premises (P. Dempsey, personal communication, 8 August, 1991). One of the more common and effective forms of industrial action involved the stopping of a concrete pour. This was often utilised on major construction sites, where the costs of rectification were highest, and thus this type of action had the greatest impact (Noakes, The Building Economist, 1981):

The deliberate breaking of concrete pours... [resulted] in visible physical damage. But even more seriously there [was]...a willingness to damage the industry through disputation regardless of [the] consequences for the industry...

There was also an increase in demarcation disputes i.e. disputes which arose because one union’s member(s) decided to undertake a task that was technically, in the opinion of an opposition union, not part of that union’s work description. The loading and unloading of vehicles was one such area of contention. For instance, if a joiner personally delivered some items of joinery to a site, unloading of the vehicle at the site would have to be carried out by another worker. The task would usually be undertaken by builders’ labourers, who would reputedly (K. Bleechmore, personal communication, 25 March, 1992) often carry out the task when they were ready to do so as opposed to when it was required. Demarcation disputes
often had a detrimental effect upon the specific project and associated construction employees alike (Noakes, The Building Economist, 1981):

*It is difficult to imagine anything more wasteful and unjustifiable than a protracted argument between trade unions about the coverage of work which shuts down projects and costs employees their jobs.*

The nature and size of building industry unions began to change during the 1980's. There were several reasons for this. Macro-economic policy and developments within the A.C.T.U. promoted the concept of fewer but larger union organisations. This inevitably meant that amalgamations and "take overs" would occur, the results of which would be favourable to some unions but not to others. Some building industry unions such as the BLF, for example, saw these moves as being detrimental to their existence at the time, and attempts were made to ensure their future survival. The unions which considered themselves under threat attempted to increase their membership bases. There were two basic ways of doing this. One was by recruiting members who did not yet belong to a specific union, and the other was to recruit them from sources such as other unions. Disputes on sites, therefore, often erupted as a result of inter-union action, as opposed to an independent cause such as worker safety. The consequence of these actions was, however, that the client suffered (in terms of lost time and money) and ultimately paid the final price.

Conversely, however, some projects were free of any significant industrial unrest. This applied primarily to small to medium scale developments. In situations such as these, clients benefited from projects which were run efficiently and effectively with the potential for dispute minimised. The outcomes sometimes resulted in benefits for the client in the form of a reduction in time programme and/or cost.

Due to the increased building activity during the boom, materials and labour were often in short supply and some builders and sub-contractors were involved in taking advantage of clients. As a result, delays were frequently experienced and premium prices were charged and paid. What existed in fact, was a captive, and often development-obsessed, market and the
prices charged directly reflected what that market was willing to pay.

With the increase in economic viability, organisations and individuals alike felt safe in taking risks that they may not have taken had the circumstances been different. Money, in the form of borrowings, was readily available, even if premium levels of interest did apply. Developers undertook loans which entailed massive financial commitment - in some cases, the borrowings exceeded the security. Organisations, such as those holding superannuation funds, also invested heavily in the property market since it was considered by the community as a whole, to be a secure form of investment. Due to availability of funds and the "spend everything" mentality of the community at large, there was also a marked increase in the level of imports which entered Australia. This was to have its own consequences for the economy, in particular the building and construction industries which, mentioned previously, related directly to the state of the national economy.

The stockmarket crash of October 1987, saw the beginning of the end for many individuals and organisations. People and companies who had invested their savings (and in some cases borrowings) in the sharemarket, were suddenly thrust into a world of unparalleled debt. Bankruptcies were inevitable and this had a domino effect on other sectors of the economy. That is, with companies going into bankruptcy, liquidation or receivership, many people lost their jobs and the unemployment queues began to grow. More people started to become dependent upon an already overloaded welfare system, and the government coffers were beginning to drain as a result of reductions in its resource base i.e. taxable incomes. With the allocation of government funds coming under closer scrutiny, injection of same into areas such as building developments and capital works projects diminished.

Thus, the decline of building development in both the public and private sectors meant that the building industry was once again becoming competitive. Builders and sub-contractors were starting to reduce the price of their tenders, cutting profit margins in the process. Cost effectiveness was once again becoming a significant issue for consideration.
THE SUB-CONTRACTING SYSTEM

Although the sub-contracting system evolved approximately a decade prior to the 1980's, it became the normal practice by the early 1980s. Traditional building practice saw the majority of builders employing tradespeople on a continual basis. That is, builders would formally employ carpenters, painters and so on, and inherent in this practice was a requirement to buy or lease expensive tools, plant and equipment. Changes within the union movement brought with it increased wages and conditions including holiday pay, overtime payments, sick leave and so on, while the economic downturn of the early 1980's led to increased competition for a decreasing market share. Builders were now in a position where they had to cut costs in order for their tenders to be successful. One way of doing this was to shed traditional staff and plant and equipment liabilities. Many tradespeople who lost their jobs embarked on a process of sub-contracting their services.

After several years of operation, the sub-contracting was seen to be beneficial to both parties. It was of benefit to the builder since he was at liberty to seek prices for trade packages on a competitive basis. There was also the matter of being selective with regard to which sub-contractor was finally chosen for any project. For instance, if a builder employed a particular sub-contractor on a project, and that sub-contractor performed well, it would be likely that the sub-contractor would be ensured of repeat work from that builder. The reverse scenario was also possible. By only engaging tradespeople on a job to job basis, the builder no longer incurred costs during periods of non-production or reduced cashflow. Also, because sub-contractors were effectively self-employed, or likewise employed their own staff, the builder did not incur costs associated with holiday pay, superannuation benefits, sick pay and so on. The majority of sub-contractors would make it a practice to supply their own tools, plant and equipment, which provided additional cost advantages for the builder.

The sub-contractors themselves also benefited from the system. Like the builders, they were able to select the projects for which they wished to tender, and consequently the builders for
whom they wished to work. They were at liberty to work on more than one project at one
time (provided it was logistically possible), and generally to work at their own pace
provided they met overall time programmes. Many smaller sub-contracting firms also found
that pressure to join unions was reduced, and usually limited to larger and/or more
prominent building projects. In addition '[as] principals or partners, subcontractors have
access to various tax advantages...' (Woodhead, Builder NSW, March 1978). The financial
advantages included "cash deals" where sub-contractors were paid for work done in cash,
and such earnings were often not declared as income. This practice has been substantially
reduced since the introduction of the Prescribed Payments System (PPS) by the Australian
Taxation Department.

(c) PARA-PROFESSIONALS

During the economic boom of the mid 1980's the building, and particularly the project
management lobby, became more aggressive in their approach and marketing. There was a
concept developing and actively being promoted that the best method of project delivery for a
prospective client was that of project management as opposed to the traditional
client/architect/builder relationship. It was claimed by this lobby that the traditional
system held too many pitfalls, unknowns and inconsistencies. Clients were advised and
encouraged to utilise one organisation for all their requirements. In many cases this
particular form of project delivery did work since it satisfied a client by giving them a
physical end product, for a given price. Problems have arisen, however, on projects where
the final cost has not been fixed. i.e. where a cost-plus system has operated. Other problems
include final products which do not meet client requirements in either the short term and/or
the long term. This is particularly relevant with design/construct projects, since the client
is often committed to accepting the final product regardless of its overall suitability. This is
exacerbated by provision of an often incomplete or inadequate Brief.

As has been mentioned, project managers actively promoted their services. Professional
organisations like the R.A.I.A., for instance, did not undertake promotion of their services to the same extent. The result was that project management became a readily accepted form of project delivery and professionals such as architects were relegated to behind the scenes operations. Aspects of this situation will be discussed later in this section.

During the economic decline of the late 1980's there developed a trend amongst builders and project managers to undertake speculative work. That is, builders and project managers would conceptualise a project and then try to sell the idea. In some instances, the builder or project manager would actually purchase the site, construct the project and then sell it, or alternatively, propose a scheme for a particular site without purchasing it and then try and find an end user before construction was undertaken. In either of these situations, it would be imperative for the builder or project manager not only to identify a potential client, but also seek the most competitive prices in terms of both trade packages for construction, and professional fees for design aspects. The results of such an approach were many. Some of the more common or significant consequences were:

(a) Sub-contractors would cut their costs often negating profit margins in the hope of regaining any losses as the project developed. In some cases this led to confrontational situations, while in others it would lead to claims of "I didn't allow for that";

(b) Sub-contractors would reduce the standard of their work to more accurately mirror the consideration they were receiving which often led to sub-standard workmanship and use of inferior materials and equipment;

(c) Design professionals would be asked openly, or by invitation, to bid for fees and subsequent involvement in the project, and due to legislation concerning the Trade Practices Act this practice was quite legal;

(d) Successful design professionals, like other sub-contractors, would find themselves
in a position of compromising the quality of their designs and/or service in order to stay within predetermined budgets.

(d) **CHANGES IN THE PROFESSIONS**

The introduction of the *Trade Practices Act* brought with it open competition not only for projects but also for fees. The consequences were essentially twofold. During the early 1980's, when the economy was experiencing a downturn, the building industry overall became quite competitive. A practice developed from within the ranks of the participating professions of lowering fees, commonly referred to as "fee cutting". One could not argue that the practice was prolific but nonetheless, the number of firms involved in such practices was starting to increase. The rate of increase started to climb as potential clients became scarce. Also, architects in particular, had never really been aggressive or progressive in their marketing. Many wrongly believed that they did not need to market themselves or their services since there would "always be a need for architects". Representative bodies such as the R.A.I.A. also did little in way of promotion of the profession. They soon found out that this was perhaps an oversight.

Many may argue that with the increasing acceptance of project management as an alternative form of project delivery system, came the decline of the architectural profession. Architects were no longer perceived as "necessary" in the community - there were others who could do the job. After all, it was frequently claimed, "anyone can design a building". This general attitude, together with the increasing emergence of "building designers" helped to assist the decline even further and reinforce the notion that architects were secondary contributors to the building process. With respect to the construction phase of a project's development, many architects found themselves in a position of taking instructions from builders or project managers, as opposed to the former traditional situation of giving instructions and making recommendations to them.
The architectural profession sometimes argued that another reason for the minimal involvement of architects in the Australian building industry was a lack of education of the general public. That is, amongst the general public there was a distinct lack of informed knowledge with respect to the building process and, more significantly, to the processes of design and the resultant products. This shortfall in knowledge extended throughout the design fields, encompassing the areas of building, furniture, graphics, jewellery and industrial design to mention a few. This lack of education had produced a community that did not appreciate the potential benefits, for the short or long term, of good design and, therefore, could not understand the benefits of using a professionally qualified and trained designer. At the same point in time, professional representative organisations like the R.A.I.A. did little, if anything, to promote the profession in the eyes of the public.

Concurrently, there was developing a degree of criticism of architects. The criticism centred around the idea that architects could not design to a budget or a time frame. In some cases this was indeed true, however, many within the profession argued that the notion was promoted in excess of the reality of the situation, and that only the unsuccessful projects had gained recognition. That is, for every unsuccessful project there were numerous other successful ones. It can be argued that the opportunity to implement cost variations and extensions of time related directly to the form of contract used and administered accordingly. Thus, the forms of contract developed, employed and which consequently gained acceptance through various sectors of the building industry could have, in themselves, been equally to blame for any shortcomings in the building process at the time.

The state of affairs was rapidly moving towards a situation which reinforced the misconceptions that had developed over the years. In so doing, it was giving credence to the arguments put forth by other sectors of the building industry, such as those promoting the project management concept.

The introduction of the Trade Practices Act brought with it quite serious consequences for
the building industry professions. During the early 1980's, the reduction in activity within the Australian building industry created a situation in which architects (and other design professionals) attempted to win projects at any cost - simply to stay in business. The result of this was the emergence of fee cutting practices, the outcomes of which have been discussed previously. The situation had led to a new trend being established. It was now possible for people or organisations seeking the services of a professional designer to approach one (or more) and obtain a fee quote for services. While there is nothing untoward in this practice, what developed was a situation where fees were being negotiated downwards while the services demanded were retained or increased as if an appropriate fee was being paid. All in all, the market was demanding lower fees and architects and other professionals were responding accordingly. This approach can be linked to three primary conditions. The first relates to a greed factor on behalf of the consultants. That is, the more commissions they were able to secure, the more income they could gain thereby offsetting any losses they may have made as a result of the practice. Also increased cashflow enabled some firms to meet expansion objectives. The second relates to the position of the project manager (or equivalent party) being able to influence control over secondary members of a team (perhaps with the threat of non-commission in the event of failing to agree). The third relates to the project manager (or equivalent party) being able to secure a larger profit margin on the project overall if the design fees component is reduced.

The mistake made, however, was that these professionals were often not thinking of the consequences of their actions or indeed the long term effects. It is claimed by members of the profession that many of the individuals or firms who participated in fee cutting in the early days did so in the belief that when “times got better” they would once again be able to charge higher fees. This was not an accurate assumption.

The building boom of the mid to late 1980's saw increased activity within the building industry. With regard to the position of architects, engineers and other industry professionals, trends established in the years prior were now truly entrenched. Contrary to
the belief of many architects, they did not find themselves in a position of being able to claim higher fees for services rendered in direct relation to price increases within other sectors of the industry. That is, although building construction costs rose dramatically, this was not mirrored in the area of professional fees. The effects of fee cutting were not fully evident until the building boom had collapsed towards the beginning of the 1990's. While the boom existed, the quantity of work available was sufficient for the survival, and in many cases expansion, of existing practices. During this period, cashflow was sustainable and thus did not result in those practices experiencing any real trading difficulties. The consequence of this situation was that many practices were unaware a potential problem existed.

The other outcome of the building boom, in relation to professionals, was that project management had been established as a viable and accepted form of project delivery. Many architects were now well entrenched in a system which relegated their involvement to that of a secondary consultant. Although the majority of these participating practices were in fact satisfied with the arrangement, other practitioners were not. Of this latter group, many argued that practices of acting as a secondary consultant and/or participating in fee cutting were contrary to their formal training. It was considered that architects who were a party to such an agreement could not truly or fairly represent the real client and thus were not in a position to meet the objectives of the R.A.I.A. Code of Professional Conduct which reads, in part, that members have a responsibility ‘..."to promote the concept of architectural excellence and to ensure that the quality or adequacy of services offered is not compromised in establishing levels of recompense for their services"...' (Cooke, 1989, p.126).

(e) CONSUMER AWARENESS

The intention of the Trade Practices Act was to create a system of open competition and non-restrictive trade practices. Aspects of fee cutting in professional spheres and "one stop shopping" with regard to building development services has already been discussed. The demands placed on the Australian building industry and the methods of practice created
within it have resulted in positive and negative outcomes.

The negative aspects, such as fee cutting, diminished responsibilities, increases in union power, unsuccessful political strategies and the true effects of open competition have been dealt with in some detail and considered in relation to how they affect the various participants within the industry.

The positive aspects, on the other hand, need to be clearly identified. Open competition, although not generally advantageous for the parties directly involved, was seen to be an advantage for the consumer. That is, there were no longer controls on so-called minimum fees, but rather a system of negotiation was established. This, it was argued, would enable a wider range of consumers to use professionals in building development projects. The truth is yet to be discovered, but little doubt exists that affirmation of the claim, and thus any benefits derived therefrom, will depend largely on the future education of the general public in regard to issues about design, the building industry and the built environment. Without such education, there will still be predominantly the same number of clients using architects and other professionals in the future as there were in the past. The only difference being that they will use them for a lower price.

Although consumers, in general, have not been educated in the processes of building in the Australian context, they have been significantly informed about their rights under legislation covering consumer protection. Consumers have been protected by law against such things as false advertising, fraud and conditions affecting purchase of goods or services. The result of this form of education or mass-information procedure was that consumers were not only in a position to understand their rights, but were also legitimately demanding that those rights be upheld. The demands have since extended beyond this fundamental objective to a situation where consumers also made demands prior to events. That is, they were demanding that minimum quality standards apply - both in respect of product and service. The evident reaction to these demands could be seen in their purchasing patterns: if
they did not accept what was being offered they would either go elsewhere to obtain what they wanted, or else they elected not to accept anything as a substitute. Consequently, the market was determined by the demand. Likewise, the building industry had a tendency to fluctuate, in terms of output and methods of operation, to meet any demands. The proponents of fee cutting practices and alternative project delivery systems thus claimed that they were only responding to market forces as they existed.

6.1.3 The 1990's

(a) POLITICAL, INDUSTRIAL AND THE ECONOMIC INFLUENCES

The national economy had deteriorated during the late 1980's (INDECS, 1990, p.102):

Of all the problems besetting the economy in the 1980s, none [had] been more central to economic developments in Australia than the deterioration in the current account of the balance of payments and the accompanying rise in Australia's foreign debt.

This legacy was transposed to the early 1990's. The last two years in particular have seen massive debt develop, both in terms of the private and government sectors. Several States of Australia, including Victoria and South Australia, now have debt levels in excess of several billions of dollars. The Federal Government has also been increasing its debt, mainly in relation to foreign borrowings (INDECS, 1990, p.115-116):

...Australia's foreign debt problem stems from a combination of two factors: the first is the scale of the debt, caused by the large current-account deficits of recent years; the second is its composition, as reflected in the high proportion of repayable short-term debt. But the link between the current account and foreign debt also runs in the opposite direction: rising debt implies a rising flow of income payments to foreign wealth holders in the form of interest and dividends, and these in turn contribute to larger current account deficits.

The debt incurred by the government, both nationally and at a State level, has been due to various reasons, many of which are quite complicated in their nature. Some reasons include general over-expenditure, increased borrowings involving higher interest repayments,
increases in welfare payments, reduction in exports (particularly agricultural and mineral products) and decreases in tax revenue. The decreases in tax revenue have eventuated for various reasons, the most evident being the reduction in income tax (due to massive increases in unemployment), sales taxes (due to reduced overall spending by the population) and from decreasing company profits.

Private debt has resulted from over-expenditure, excessive borrowings (local, national, international), stockmarket collapse, downturn in the national and international economies resulting in a reduction in markets and, to a lesser extent, higher government taxes and charges.

Investment in the building and construction industry has decreased markedly over the last two or so years. There are various reasons for this. They include the over-development that occurred in the mid to late 1980’s, the result of which was a glut of building space available on the market (Dept. Industry, Trade & Technology, December 1991, p.8):

*The building industry has entered a period of rapidly declining activity. A further significant decrease in activity is expected over the next two years. Most commercial building categories are now clearly oversupplied following a large rise in the building stock and fall-off in demand.*

secondly, damage suffered by banks and other financial institutions as a result of industry collapse and failure to meet debt resulted in most lending authorities changing their practices and making lending procedures significantly more restrictive thereby discouraging investment in building development. Thirdly, property values declined (Dept. Industry, Trade & Technology, December 1991, p.8):

*Oversupply and the recession have led to a fall in property values which has been compounded by forced sales from the more highly geared end of the property market. This has further tipped the scales against new building in many areas and has been responsible for a significant fall in forward commitments for new work experienced by the architectural and engineering professions.*

Consequently, the properties developers and other organisations had used as security for
borrowings were no longer deemed as valuable. This, in turn, meant that many loans were prematurely called in and the parties concerned suffered even more.

The banks and other such organisations were trying to limit the losses which they had incurred. The decline in property values also affected investments such as property bonds - those that existed were no longer as valuable, and any proposals for further commitment to such forms of investment were seen as unviable. Another reason for decreases in investment was the changes to the Australian taxation laws. In previous years it was possible to "negatively gear" properties in an effort to reduce tax liabilities. This had now effectively been eliminated and, therefore, it was no longer an attractive proposition to commit investment funds to property development.

The late 1980's and early 1990's has also seen other developments, particularly in relation to the union movement. One building union, namely the Builders' Labourers Federation (BLF) had its headquarters in the State of Victoria. The union had become very militant in its approach and its influence was considered to be excessive by both the State government and private sectors. The Victorian State Government undertook procedures to investigate the union and its practices. The outcome of the investigation was that the BLF was de-registered in that State. The union has subsequently set up its headquarters in South Australia, where many within the industry believe they have been given refuge. After their expulsion from Victoria, building projects there have suffered less from industrial action (J. Curtis, personal communication, 24 April, 1992).

Traditionally, industrial action has been predominantly limited to large construction projects. The reasons for this may be twofold and relate to this type of project's high capital value. In the first instance, such a project will inevitably employ a large number of tradespeople both on and off the site. This makes it a prime target for industrial action since any interruption in the progress of the works will have serious implications for holding costs and time programmes. Holding costs become critical in direct proportion to the capital
value of the project, thus the longer any delays or larger other action-incurred costs become, the greater the resultant effect. Also, partially due to large numbers of people employed and the high capital cost, unions concerned believe that they are better placed to demand higher wages and elaborate conditions. Such negotiations generally occur between the unions concerned and the successful builder or project manager. However, in the end it is the original client (and inevitably the end user) who pays the price. The builder or project manager, for instance, may have nothing to lose by negotiating a higher price because they will be reimbursed, unless they are committed to a fixed price contract. That is, they may or may not be affected depending on the form of contract that has been used between them and the client - whether the agreement allows for rise and fall or other variations beyond their control, or alternatively whether they have agreed to undertake the project for a fixed price.

Conversely, some of the most significant achievements by the industrial movement have related to the development of safe work practices and procedures. In relation to the building industry, and particularly the work carried out during the construction phase of a project, safety covers a wide range of matters. This includes the provision of scaffolding, guards and rails, protective clothing and head wear, adequate and proper training with respect to the use of plant and equipment, limiting weights to be lifted manually, and restricting working hours to periods during which excessive temperatures do not apply.

( b ) INDUSTRY ISSUES

Several issues have arisen over the past few years which have had a significant influence upon the Australian building industry. The three areas of particular interest include the Royal Commission into Productivity in the Building Industry in New South Wales, the development of quality assurance programmes, and a report by the NPWC/NBCC joint working party entitled "No Dispute" on the strategies for improvement in the Australian building and construction industry. These are discussed below.
The Royal Commission

Although the Royal Commission into Productivity in the Building Industry in New South Wales has concentrated on the industry’s practices in that State, it also encompassed issues of national concern. Of the matters investigated, those which have gained the most interest (and media coverage) include the secret fees and commissions employed by the Master Builders’ Association (M.B.A.), secret fees to unsuccessful tenderers and excessive and often unjustifiable over-charging during the course of a project’s construction.

The Royal Commission found that the MBA was engaging in (Lau, C.K., & Ferrari, J., The Australian, 27 August, 1992):

...practices defined as collusive tendering by Commissioner Holland... namely undisclosed tenderer’s fees, undisclosed special fees on successful tenderers, cover tenders, [and] uniform tender provisions...

Pieter Bruce commenting on the Royal Commission (Building Owner & Manager, Nov. 1991) reviewed some of the aspects considered. An example of undesirable practices involved builders trying to justify hidden tendering fees. Bruce (Nov. 1991) referred to a press release by Lyn Shaddock, a past president of B.O.M.A. N.S.W that, ‘...there is not a strong argument for head contractors to demand a stiff fee to reimburse tendering costs, when more than 80% of the work (and of the tendering) is done by sub-contractors’.

Bruce (Nov. 1991) cites the example of a project for Industrial Equity Ltd (IEL) known as “Metroplaza” in the retail centre of North Sydney. The contract was won by Girvan Corp Ltd and had a contract value of $135 million. Bruce (Nov. 1991) reports that:

Girvan loaded its tender price with $3 million it paid to the losing tenderers, the MBA and the Australian Federation of Construction Contractors.

Girvan talked IEL into advancing $950,000 to buy the site a more powerful crane to speed up work. IEL did not check, or it would have determined the price of the crane was only $850,000, and anyway, Girvan leased, rather than bought it. And the net building cost is going to be more than $200 million.
Bruce (Nov. 1991) also refers to the use of architects and project managers in the construction phase of a project and suggests:

Lack of accountability cost is one of the biggest flaws in the building industry. The bad old days, where the architect was at the top of the management tree on site, are gone forever.

Building and the materials handling processes are just too complicated, and the commitment of a good architect to the integrity of his design just too great to let the architect loose with overall responsibility.

The now accepted profession of project management, which hailed itself as the policeman-cum-troubleshooter of the building industry, has been discredited too often to be taken seriously as the solution to cost and time overruns.

And project managers, the agents of the clients, did not detect, or want to see, the practices, theft and secret commissions exposed by the Commission. How do project managers justify their existence if they honestly could not see or control this squalid behaviour?

Bruce (Nov. 1991) warns that building owners and developers should be aware of the common danger signs with regard to issues which may give rise to a claim by the builder for extra money or extra time:

...alarm bells should ring in the mind of any institutional developer or building owner undertaking refurbishment when its head contractor complains of unions, work practices, bad weather, the architect's unworkable design, or any of the other popular excuses for poor performance.

And goes on to add:

Renting a bloodthirsty lawyer who draws up a tough contract is pointless unless the contract is enforceable and is, in fact, enforced.

Bruce (Nov. 1991) makes reference to comments made by David Chandler, managing director of international construction for Fletcher Challenge. Chandler was formerly managing director of project management firm Australia Pacific Projects, and prior to that was a director of Concrete Constructions:
He used to say there was rarely a management structure on a building site which clearly identified responsibility. Even when there was, few contractors had the financial or management strength to carry the responsibility.

Chandler has a compelling argument that there should be capital adequacy requirements for builders. Get a builder with resources to do the job, and force him to swallow the cost overruns. Penalise him, even for going over time.

Investigations such as this Royal Commission exposed some of the rorts which existed within the Australian building industry for many years. Although such exposure was detrimental and, needless to say, embarrassing to the parties concerned it should nonetheless be beneficial to the industry as a whole in the long term. The government and general population alike must recognise that such fraudulent practices are no longer sustainable, nor should they be tolerated. Changes are inevitable and long overdue.

Quality Assurance

Quality assurance is essentially about providing a product the quality of which corresponds with the price paid for it. It is not necessarily or even impliedly about the creation of products of a better or higher quality than previously may have been the case (K. Bleechmore, personal communication, 25 March, 1992).

Unfortunately, misconceptions about the definition of “quality assurance” and “quality control” have arisen over recent times. These factors are dealt with in more detail in Chapter 9.

“No Dispute”

The late 1980’s saw a marked increase in the incidence of contractual claims and disputes in the Australian building industry (J. Sharkey, personal communication, 30 September, 1991). Many members of the industry believe that a change in attitude towards dispute resolution and litigation had developed. The parties involved found themselves in a position of
either making or resisting claims, the action of which had little to do with the merits of those claims. The attitudinal changes were considered aggressive and confrontationist in approach, the result of which was a detrimental effect upon the efficiency and climate of the industry at the time. A research project group was formulated and included senior management personnel from the Australian Federation of Construction Contractors, the Australian Institute of Quantity Surveyors and Federal and State Government Construction Authorities. This Group was charged with identifying and reporting on the principal causes of claims and disputes within the building industry. Their Report entitled "Strategies for the Reduction of Claims and Disputes in the Construction Industry - A Research Report" was published in November 1988. The Group made a large number of recommendations which were intended to encourage a change in practices and attitudes. It was hoped that, in turn, this would reduce the incidence of claims and facilitate the settlement of legitimate claims in a fair manner and within a short time frame ("No Dispute", 1990).

Subsequently, a joint working party of NPWC (National Public Works Conference) and NBCC (National Building and Construction Council) was formed to comment on the recommendations of the Research Group. Their findings were published in May 1990 in a report entitled "No Dispute - Strategies for Improvement in the Australian Building and Construction industry". The Report aimed to encourage discussion and debate in the Australian building industry, and to contribute to the development of amended practices which, it was hoped, would result in better performance and fewer disputes. "No Dispute" comprised some thirteen papers, each of which were prepared by a separate sub-group. The topic covered by each paper was analysed and debated within its respective allocated sub-group and then presented for detailed review and criticism by the joint working party as a whole.

The discussion to follow summarises the major findings of the Report.

(i) "No Dispute" identified unfavourable work practices which could be eliminated or the incidence thereof minimised if efficient project performance techniques were
(ii) It was recommended that the term “allocating risk” ("No Dispute", 1990, p.12) be redefined to mean “allocating obligation”, and it was also considered important that:

Obligations and/or risks within the control of the Principal should be borne by the Principal. Similarly obligations and/or risks within the control of the Contractor should be borne by the Contractor. There should be no discrepancy between the responsibility of a party regarding an obligation and/or risk and the party’s authority to control or influence that risk.

(iii) “No Dispute” recommended that standard forms of contract be used since members of the industry are generally familiar with them (as opposed to individually prepared contracts) and precedents have already been set with regard to legal judgements. It suggested that in some instances standard contracts can be amended, but if this was done then such amendments needed to be comprehensible and clearly identified.

(iv) The issue of the selection of builders is also covered. “No Dispute” recommended that the system used to select builders should be ‘fair and equitable’; tender documents need to be clear and unambiguous; tendering procedures should follow a recognised and accepted tendering code; public tendering should be retained (especially for government work); selective tendering should be limited to a maximum of six tenderers; generally the lowest tenderer should be the one selected (unless otherwise specified); alternative tenders should be able to be considered; and a tenderer’s claims history should be investigated. All these conditions should also applied to the selection of sub-contractors.

(iv) The quality of tender and construction documents was considered in “No Dispute” (1990, p.67) and it stated:

1. The Research Report argued that errors, contradictions, ambiguity in and late delivery of contract documentation, giving rise to delays and inefficiencies, are the greatest cause of claims and disputes in the construction industry.
2. The Report pointed out that the client's brief is the starting point for all projects, and that often it is the brief that is inadequate, leading to poor documentation in the design strategies, as well as the actual contract documentation.

3. The Report also refers to the late issue of documents particularly in relation to further documentation provided during the construction period. A view has been expressed that the quality of documentation has been reducing over recent years with a lowering of the level and detail of documentation standards.

With regard to Item 3, the perceived decline in documentation standards may be due to fee cutting, and the often inherent reductions in quality that inevitably arise from such practices.

( v ) "No Dispute" (1990) claimed that there are several things that could and/or should be done in order to improve the quality of documentation. These included: a single point of responsibility to ensure adequate co-ordination of documentation; appointment of consultants to be on merit 'not just fees'; client to be given detailed explanation of design and documentation processes; there should be an adequate allocation of time and resources for design and documentation production; consultants fees and services should be agreed with the client; consultancy agreements should be defined for all stages of the duration of a project; consideration should be given to the appointment of a builder during the design and documentation process; quality assurance and control principles should be applied during design and documentation stages; and if a bill of quantities is used it should be based on final tender documents.

The roles of the various parties to a construction contract in relation to ways of increasing efficiency were discussed in "No Dispute". Recommendations included that there should not be any contradictions in the contracts existing between proprietor and superintendent, between proprietor and design consultants, and between proprietor and head contractor. Likewise, head contractor/sub-contractor agreements should not create any conflict with any other contracts employed. It also
suggested that obligations of parties be clearly defined; the use of a superintendent be maintained for the purposes of client's agent and certifier; parties to the contract should co-operate to ensure the completion of the project; involvement of head contractors and specialist sub-contractors during the design phase of the project; the head contractor should retain responsibility for all industrial relations matters on site, but should consult with relevant sub-contractors since it is these participants who are ultimately affected. The proposal that:

..."in order to avoid conflicts of interest and resultant claims and disputes in relation to design and design documentation, the designer should not administer the construction contract - a separate person should be engaged to do so"... could not achieve consensus ("No Dispute", 1990, p.104).

(vi) Discussion on cost management covered improved cost management and the use of bills of quantities. With regard to the first matter, it was suggested that the role of the cost manager be incorporated into the principal project team and not be a separate person; end costs should be adopted in lieu of current cost budgeting or commitment cost approvals; and cost management should be treated as a 'balancing or trade-off activity' rather than an 'after-the-fact cost reporting activity' ("No Dispute", 1990, p.118). It was recommended that the use of bills of quantities be restricted to large-value or complex projects; that a simplified and common method of measurement be applicable; and the conditions of tendering should place all risks associated with pricing on the tenderer.

(vii) The issue of the use of nominated sub-contractors is one which often involves disputes. "No Dispute" (1990) recommended the following: nomination in areas of specialisation is still relevant, and proprietors should decide whether such specialists are required; in government projects, nominated sub-contractors should not be used for monetary thresholds below a certain value as determined; conditions of contract applying to nominated sub-contractors should be compatible with those of
the head contractor; and if the builder was required to engage the proprietor's
nominated sub-contractor, indemnities should be afforded.

(viii) Time management was also considered in "No Dispute" (1990). Some of the
following recommendations were made: the project as well as the contract should be
managed; positive attitudes and co-operation needs to be developed; realistic
construction times should apply and tender period should provide for discussion
concerning this; dates for supply of information need to be defined; overall project
programme should include design and documentation phases; effective communication
procedures should be employed; contractor should be entitled to extensions of time
for delays caused by the proprietor; specific time periods should apply to extensions
of time claims; liquidated damages are seen as a suitable remedy for late completion,
but rates should be 'realistic'; negotiation is preferable to imposition of remedies;
reasons for disruption to the works need to be defined; any requirement for reduction
in programme should involve a separate agreement; and sub-contractors should have
the same rights as those of the head contractor.

(ix) It is often argued that conditions which provide for the claiming of extra moneys,
namely variations, will result in a dispute arising. A summary in "No Dispute"
(1990) of some of the findings and recommendations included: that the keeping to a
minimum of the number of variations was in the interest of all parties; ordering and
executing variations compounds inefficiencies due to the disproportionate amount of
time associated with these practices; "urgent" variations should be avoided wherever
possible; variation instructions should be explicit; variations should be covered by a
realistic contingency amount; progress payments should not be prejudiced by
unresolved variation claims; variation valuations need to be fair and appropriate; and
time restrictions should apply to the implementation of variations.
The administration of claims ("No Dispute", 1990) involves a certain approach to any problems and ways of minimising disputes in this area was recommended as follows: a realistic construction programme was required and needed to be regularly reviewed and updated; delay cost implications should be investigated prior to any action being taken; time restrictions should apply for such things as notification, submission and approval or rejection of claims; unexpected claims had the tendency to create friction and dispute; and verification of all identifiable costs at tender stage to reduce claims incidence.

(x) Disputes in themselves need to be dealt with in an appropriate manner. "No Dispute" (1990) recommended that: contracts should include time limits for referral to any form of alternative dispute resolution; expansion to the scope or extent of a dispute should be disallowed; negotiation should be the first avenue for solving disputes followed by alternative methods of dispute resolution; alternative dispute resolution methods are only valid if the conflicting parties have a desire to resolve the issue; and arbitration and litigation should be considered as a last resort for dispute resolution.

The "No Dispute" (1990) document includes discussion and recommendations on other aspects such as training, alternative contract strategies and quality assurance. With regard to the latter two topics, further discussion is undertaken in Chapters 7 and 9 respectively.

(b) CHANGES IN THE PROFESSIONS

The theory behind the Trade Practices Act, both in terms of eliminating restrictive practices, particularly in relation to fees for services and freeing rules associated with competitions, was supposed to have been of benefit to the professions concerned as well as the wider community. This has not worked. The true result over recent years in particular, is that professionals and para-professionals have engaged in excessive fee-cutting operations.
in order to gain commissions. In so doing they have elected to undertake their work on one of two bases. The first option to is carry out the work to the same standard as if they were receiving “full” or adequate fees. The disadvantage of this situation is that the practice is then not in a position to meet costs, in fact, money is generally lost in the expenditure. The second option is to tailor the service to the fee received. This may assist the consultancy practice in its financial commitments, however, it is generally at the client’s expense, both in terms of service given and quality of documentation and the end physical product. In either case, however, the professional consultant still retains the same professional liability for work done, regardless of the fee received.

As a consequence to this practice of fee cutting, is the emergence of an attitude amongst some architectural practices of “removing the competition”. That is, by dropping fees to such a level that any other offer made appears excessive, that lowest offeror would effectively negate the competition. That is, for every commission that was secured by that firm, another firm missed out. This may appear to be an extremist view, but discussions with members of the architectural profession in Australia today, reveal that such attitudes, philosophies (generally unwritten) and methods of practice actually exist.

It is clear that there will not be any significant changes nor for that matter improvements in responsibility, authority or status of architects and other design professionals while such profession-destroying practices continue to exist. Likewise, the responsibility for changing the current situation lies both with the individual professionals concerned and the representative bodies of which many are members. Comments were raised earlier in this chapter about the need for educating the general public with regard to design, the building process and the built environment. It may also be suggested that education or rather re-education of the members of the professions is also required.
The Legal Profession

Up until several years ago, the involvement of the legal profession in matters associated with the building industry, in particular contractual matters, was relatively limited. Investigations reveal that the legal profession’s involvement was generally limited to giving advice to parties prior to the signing of standard forms of contract and engagement for the purposes of litigation once a dispute had arisen.

Over recent years such involvement has increased and expanded. Lawyers are now more frequently involved in litigation, as can be illustrated by the consequences of the changing attitude of participants in the industry to deal with disputes in an aggressive and generally confrontationist manner (“No Dispute”, 1990). The other verification of diverging trends within the legal profession, is the current involvement of some members with two distinct areas of contract law. The first involves the amendment of standard forms of contract to create new contracts. The second area concerns the writing of totally new forms of contract. In both instances, these new documents are often referred to as “home grown” contracts. This terminology has arisen because these contracts are usually created for an individual project, and components such as the conditions of contract are project specific.

One form of alternative method of project delivery which has developed over the past several years is “novation”. The term novation centres around the concept of risk transfer and it is dealt with in greater detail in Chapter 8. It should be noted, however, that it is within this form of project delivery system that lawyers and, in particular building industry or “construction” lawyers, have made the most significant inroads. It is shown in further discussion in this thesis (refer Case Studies, Chapter 8) that all the novation contracts under consideration included the involvement of the legal profession to a substantial degree. This is particularly true of the drafting process and applies to amended standard forms and totally new contracts alike.
CLIENTS AND CONSUMER AWARENESS

The increasing awareness of consumers to their rights has also been considered and unlike the issue of a broader education, consumer awareness is gaining momentum and, in consequence, recognition and acceptance. This has created two broad groups of people. There are those who are generally ignorant of the building industry and its methods of operation, but nonetheless are aware that they are entitled to receive a product or service if they have paid for it. If, however, obligations are not met by one of the parties, the other party can usually seek recourse and/or compensation. The second group of people includes those who do have an understanding of the process of building, whether it be detailed or limited, together with a knowledge of their rights as consumers.

People who have had experience of building will undoubtedly be influenced by the nature of that experience. That is, if a project was completed successfully, then it is highly likely that the client will consider all the participants to have performed their tasks well and that the contract and form of project delivery system selected was also suitable for the given purpose. Alternatively, if one or more participants did not perform to expectations, if the contract was unenforceable, or if the delivery system proved inappropriate for the project type, the client will generally consider the project overall to be unsuccessful. In situations such as this, the informed client may take several courses of action. In a case of the client perceiving that a particular project was partially or totally unsuccessful, that client may:

(a) elect not to become involved in building again;
(b) become involved in building again and do so in a manner which mirrors past experience, in the hope that history will not repeat itself; or
(c) become involved in building again, but vary some or all of the conditions and parameters that existed with the previous experience.

With respect to the latter course of action, some clients will actively seek alternative
proposals. These clients may also be well aware of potential problems before entering into a contract and, therefore, make other demands in an effort to increase authority or influence, reduce liability and/or transfer risk. Such clients are likely, for instance, to be aware of the problems associated with variations, extensions of time claims and so on, all of which invariably create disputes and/or alterations to the contract sum (J. Sharkey, personal communication, 30 September, 1991). It is due to these experiences and knowledge gained that clients of today are seeking alternative systems of project delivery. Clients are becoming more aware of what their money will buy, and subsequently they are demanding more. It is clients such as these who have become involved in the novation system of delivery.

At the other end of the spectrum are clients who are unfamiliar with the processes of building and it is this group who are potentially more susceptible to the influences of advertising, promotion and word-of-mouth recommendations. That is, they are likely to take note of and be influenced by publicity associated with the systems such as project management since these methods of project delivery are more actively promoted.

6.2 SUMMARY

There are various reasons why the use, form, and nature of contracts have changed. Changes have not evolved from one source, nor have they occurred spontaneously. There are numerous factors which influence decision making and trends. In respect of alternative project delivery systems and alternative forms of contract, those factors are wide spread. They include such things as the political and industrial climate; economics (on a national and international scale); changes to the structure and attitudes of professional practitioners, organisations and representative bodies; the influence of para-professionals; consumerism and changing attitudes of potential building clients and developers; and changes within the structure and operational methods of the building industry in general.
Traditional roles and responsibilities of the participants within the Australian building industry have altered over the last two decades. The most dramatic changes have been associated with functions undertaken by, and the relationships between, the design professional (usually an architect but not exclusively so), the builder (or head contractor) and the client. In a traditional system, the parties to the building contract are the builder and the client, with the architect acting as the client's agent. Alternatively, the architect's role may be undertaken by a superintendent. In either case, the contract is administered by this third party.

The situation in more recent times has altered from this traditional system. Although it is true that there are still a significant number of projects being undertaken in a traditional way, there are definite marked trends towards new project delivery systems. These variations have brought with them not only changes in methods of operation and approach, but also changes in attitude.

Clients of the building industry are seeking alternatives to historical practices and are placing higher demands on individual parties and the industry. Clients are no longer willing to merely accept what is being offered them, but rather they are now making their requirements known and demanding that those requests or standards be met.

Builders and project managers have gained greater acceptance as time has passed, and have subsequently secured their position at the top of the building process organisational tree. They are now in a position to exercise considerable influence upon that process. However, they must be careful to operate in such a way that the claims they have made in past years, with respect to promised performance and quality of results, is maintained. There is an inherent danger in such para-professionals failing to deliver the promises they have made because standards of expertise have been surpassed, are inadequate or inappropriate for the demands placed upon them. These participants must also be willing to review their work practices and the responsibilities that accompany same, including elements such as liability.
and risk.

The role of architects, engineers and other design professionals has changed quite dramatically over the last ten or so years. The most notable difference is the relationship which exists between the professional and the client. In traditional systems of project delivery, the architect is engaged by the client to represent that client's interests. There has also been an inherent duty of care which had to be exercised and a degree of liability associated with any service given. In recent times the role has changed such that the design professional has limited, if any, direct contact with the client. The relationship has now become predominantly a secondary one where the professional is engaged by a third party (eg: builder or project manager). Despite this change in relationship, the professional still retains liability for work undertaken and must exercise the same duty of care. What has changed is the party to whom the duty of care has been directed.

These changes in methods, operations and attitudes have resulted in alterations to project delivery systems. This has brought with it a necessity to formulate contracts to cater for such non-standard circumstances. In the past, only standard contracts were used and amendments were not often made. This appeared to suit the traditional practices. However, changes to contracts, like changes to other matters associated with the Australian building industry, take time to implement fully. Thus, since the time factor involved with these changes in contracts specifically has occurred over a relatively short space of time, those changes have not yet been accommodated. In the process, it has been argued by the legal profession in particular that the most appropriate way to accommodate the changing circumstances is to do so via the formulation of contracts on a project-to-project basis. That is, to create specific contracts for specific building developments.

The next chapter deals with the variety of project delivery systems currently in use in the Australian building industry.
Chapter 7: PROJECT DELIVERY SYSTEMS

This chapter explores some of the aspects associated with the variety of project delivery systems and, in the case of two systems, applicable conditions of contract available in the market today. The systems are as follows:

(a) Traditional System;
(b) Project Management;
(c) Design/Construct;
(d) Construction Management;
(e) Turnkey;
(f) Novation;
(g) Department of Defence; and
(h) Queensland Government Administrative Services Department.

A further option is also considered, namely “Fast Tracking”, which is concerned with the manner in which activities are scheduled and may be used with any of the above options.

7.1 TRADITIONAL SYSTEM

The traditional system of building project delivery involves five distinct stages of development. These are as listed below:

(a) Brief development;
(b) Design;
(c) Documentation;
(d) Construction and contract administration; and
(e) Post-construction.

7.1.1 Brief Development

During the initial stage of any project's development, a Brief needs to be defined in order that the design phase can begin. In a traditional system, a client and architect will undertake an agreement for services to be rendered based on applicable conditions with an agreed amount of remuneration therefor. Such details are normally determined before any service is actually given or fees paid. It is important that these details are finalised early since it eliminates any possible points of contention in the future. The R.A.I.A. has a standard form of Client/Architect Agreement which many members choose to utilise. The Agreement provides for definition of services to be rendered (i.e. scope of work), conditions of engagement and the basis of fee payment.

Once obligations between the parties have been decided, development of the project Brief can begin. The quality and accuracy of this task will depend upon several factors. These include the ability and willingness of the client to define their own requirements, the extent of technical information submitted (including site information), and the ability of the architect to understand and interpret the client's needs and wants. It is important for both parties that a comprehensive Brief be determined at an early stage so as to reduce the incidence of misunderstandings, misconceptions or misinterpretations. The Brief generally contains information with respect to an applicable budget, and the architect should strive to meet that budget. The proprietor has an obligation to ensure that the budget is realistic for the purpose. Likewise, the architect has a responsibility to inform the client of any inconsistencies which may exist between what the client wants and what they are willing to pay. Most construction projects, particularly those of high capital value, will require that the client seek additional financial funding and an agreement would be reached between the client and a financier. Ideally, the Brief as determined should be quantitative and qualitative
in nature.

7.1.2 Design

After a Brief has been finalised, the design process can begin. The accuracy of interpretation of the Brief will largely depend upon the quality of the Brief initially and the architect’s ability to explicate information from and communicate concepts to the client. Generally, more than one sketch proposal will need to be prepared. Presentations will usually comprise drawings and sometimes models or other forms of graphic communication. When concepts have been determined and accepted the design process will normally progress to the design development stage. This involves finalisation of the design to such detail as to allow for adaptation in the documentation stage and possibly for use in the preparation of preliminary cost estimates. Builders and quantity surveyors will generally provide cost estimates, while architects are restricted to the preparation ‘of opinions of probable cost’ (R.A.I.A. PN. 003B/2, March 1990).

During the design stage, principle negotiations and information flow will exist between the architect and the client (or their respective representatives). The architect will usually seek the advice of at least a structural engineer. Other engineers such as those associated with the mechanical and hydraulic disciplines may also be consulted. The number and type of such design professionals consulted will depend largely upon the nature and scope of the project. It is important that the client is kept informed of all design decisions and the likely consequences thereof. Failure to provide adequate information can lead to future disputes and/or breakdowns in relationships.

In this traditional system the architect is engaged by the proprietor and acts as their agent not only during the design stage, but throughout the duration of the project. The architect is also the principal consultant, and is responsible for the integration and co-ordination of all other consultants and their work. These secondary consultants are often referred to as “sub-
consultants”. The liability for the work of sub-consultants will vary depending on how and by whom they were engaged. If, for instance, they are engaged by the architect, the architect essentially becomes responsible for their work. Therefore, it is in the architect’s interest to establish an individual and independent contractual agreement with the sub-consultant(s).

7.1.3 Documentation

The documentation stage begins when the design has been finalised and accepted by the client. Although contact should be maintained between the architect and client during this stage, other relationships develop further. These relate primarily to the relationships which are formed between the architect, as principal consultant, and the other sub-consultants. There is an unavoidable need for these parties to liaise on a regular basis. The architect is responsible for the integration and co-ordination of the sub-consultants’ work and must ensure that these team members are progressing satisfactorily and that they are carrying out their roles and responsibilities to the required extent and standard. That is, the architect has to ensure that the sub-consultants are performing to requirements. If a lapse in performance occurs, the architect must take action to rectify the situation. It is important, from a programming perspective, that the documentation phase progresses satisfactorily and that no unnecessary delays are incurred.

It is the architect’s responsibility to ensure that all documentation prepared, whether by the architect or other sub-consultants, is complete in content, clear in presentation and above all not contradictory. Regular and diligent checking of documentation at prescribed intervals is vital in order to avoid any discrepancies or omissions. Additionally, it is important that this checking process occur when documents are ready to be issued for tendering purposes.

(a) TENDERING

In traditional project delivery systems, tendering procedures are employed. There are
various ways in which this can be achieved. One method is that of calling for registrations of interest by way of public advertisement. Upon receipt of registrations, a shortlist of suitable applicants is determined and these registrants are then invited to tender. Another method is invitation to tender by public advertisement. This is similar to the previous method, however, applicants are allowed to tender without the registration qualification. The third option is a private invitation to tender. In this instance, potential tenderers are directly invited to tender and the number of participants is usually limited to between five and eight organisations. The list of invitees may be determined by the architect and/or the client. The fourth method of tendering involves the architect and/or client negotiating directly with one builder. Strictly speaking, this is not a tendering situation since there are no other competitors involved. However, the builder concerned would normally be asked to provide a quote prior to the signing of a contract (although this is not always the case). If this last method of builder selection is employed, it is recommended that the client obtain a “check price” from another source such as a qualified quantity surveyor. Failure to do so may result in difficulties later in the event of any dispute arising which involves extra costs or other adjustments to the contract sum.

Finalisation of prices and acceptance of a tenderer will subsequently lead to a building contract being signed. One of the most obvious differences between the use of standard forms of contract in a traditional project delivery system and other methods of delivery and contracting, is the aspect of risk allocation and risk transfer. In the standard forms of contract, risk is either shared, as is the case in JCC, or weighted against one party as in NPWC 3. Under these conditions there exists an understanding that both parties to the contract must take some risk, the variation being evident in the nature and extent of that said risk. In traditional systems, the failure of one party to meet their obligations under the contract will usually lead to a situation where the defaulting party is significantly affected, but the other party will invariably still suffer loss in some form.
7.1.4 Construction And Contract Administration

In traditional building projects there are two parties to a building contract, namely the proprietor and the builder, with a third "party" acting as the client's agent. The agent may be an architect, as is the case in contracts such as JCC, or a superintendent as is the case with AS 2124 and NPWC 3. Refer to Chapter 3 for discussion on the details of these particular forms of standard contract.

The architect or superintendent is responsible for the administration of the contract and in so doing becomes principally responsible for the assessing and processing of progress claims and the issuing of documentation such as progress certificates and variation orders. The onus of instigating various types claims or other action, together with applicable time restraints, varies with the different forms of contract mentioned.

Under a traditional form of project delivery using a standard form of building contract the builder will issue periodic progress claims for which payment will either be received in full or as amended. During the construction stage, the builder is responsible for the extent and general quality of the work executed insofar as it relates to the terms and conditions of the contract between the parties. The builder has an obligation to perform to particular standards, not only in relation to workmanship, but also in terms of cost and time programmes. The ability or opportunity to vary any of these aspects is dependent upon the form of contract used. The builder is also responsible for the standard of work executed by any sub-contractors employed for the duration of the agreement. It is common practice for the builder to enter into a series of separate contracts, one with each of the sub-contractors concerned, and it is important that these contracts comply and are compatible with the head.

Liaison between the architect or superintendent and the client should be maintained throughout the duration of the contract. Such communication should go beyond the role and function assigned these agents by the contract to encompass the obligations associated
with professional conduct and a duty of care. The client should also be furnished with copies of any documentation issued by these persons. The issuing of such copies may be a requirement of the terms and conditions of the particular contract, or alternatively, it may simply be done out of common courtesy and partial fulfilment of the professional's duty of care to their client.

Although the builder's involvement in the project becomes pivotal during the construction phase, the architect and other consultants also maintain a degree of involvement. Quite apart from any administrative role, the architect may still be responsible for certifying the work as executed. That is, the architect will confirm whether the work carried out has been done in accordance with the contract documentation, notwithstanding that there may be latent defects in that work. Like the architect, other consultants or sub-consultants are also generally called upon to either clarify documentation, certify work executed, offer alternative solutions or reject workmanship and/or materials.

7.1.5 Post-Construction

The post-construction stage invariably incorporates a period of time for rectification of any defects by the builder. These defects may or may not have been evident at the time practical completion was effected. The duration of this defects period, together with any conditions associated with it, will vary according to the type of contract employed and the particulars of any given project. Essentially, the builder is required to rectify any defects which have resulted from incorrect or faulty workmanship, goods and/or materials. Rectification of such defects will normally be at the builder's cost, and will not extend to defects which cannot be attributed to the builder's obligations under the contract. That is, any defects which are not attributable to the builder, including any misuse by the proprietor, will not be required to be fixed by the builder. In addition, the builder will receive reimbursement for any such work executed.
Although the contract is between the builder and the proprietor, there are other parties involved in the project, all of whom have varying types and levels of responsibility during the five identifiable stages of a traditional method of project delivery. It is important that each party meets the requirements of their individual obligations irrespective of whether they are directly or indirectly associated with the building contract itself. Traditional project delivery systems employing standard forms of building contract have commonly accepted methods of operation and performance. The nature and scope of these traditional methods have a tendency to diminish in whole or in part, if the project delivery system changes. Likewise, any amendment to the standard forms of contract will have an effect upon those contracts and the terms and conditions which apply to them. The drafter of any such changes should be well aware of the consequences thereof, and ensure that the contract's enforceability and/or intention has not been compromised.

The following illustrations (refer overleaf) provide a diagramatic representation of the relationship which commonly exists between the various participants in a traditional project delivery system. Figure 7.1 details the relationships within a system which incorporates an architect, while Figures 7.2 and 7.3 respectively illustrate the relationships between participants with differing design roles, in a system incorporating a superintendent as the contract administrator.

7.2 PROJECT MANAGEMENT

The services of a project manager go beyond the scope of the traditional services offered by an architect or builder, although they may actually encompass some of them. R.A.I.A. Practice Note PN 63 (August 1979) claims that it 'is these persons [project managers] who have produced the concept and terminology of "project management" in its newest sense', and goes on to add:
Figure 7.1: Traditional Project Delivery System With Architect
Figure 7.2: Traditional Project Delivery System With Superintendent - Alternative 1
Figure 7.3: Traditional Project Delivery System With Superintendent - Alternative 2
It is probably also true that architects themselves have helped to bring about "project management" either by offering wider-than-traditional services or by confining themselves to their traditional role and thus giving others reason to act.

Many people within the building industry may argue that an architect, engineer or quantity surveyor is capable of providing full project management services, and indeed it is often these very professionals who attempt to do just that. Project management in its entirety, however, encompasses services which go beyond those for which any one of these professionals have generally been trained, and no one person is truly capable of providing them all. To do so with any validity would mean decades of training and experience over the full range of services offered. This argument is substantiated by a paper given to a Project Management Conference in England in 1975 by Mr. James (R.A.I.A. Practice Note PN 63, August 1979):

"I do not believe there is ever likely to be a genus of professional men whose sole occupation is project management. In its widest sense the job needs deep knowledge and skill in too many professional fields on too great a variety of projects. By the time anyone has obtained the necessary modicum of skill and experience to do the job well, he must be approaching the end both of his career and the reserves of energy needed for it."

Many in the Australian building industry would argue that nothing has changed. Therefore, it may be concluded that project management services should be provided by an organisation with personnel whose qualifications and experience cover the range of expertise required.

The project manager is normally paid a fee for services rendered as opposed to obtaining a fee based on a percentage of the contract sum. This tends to diminish the risk of falsifying claims or other fraudulent action. If, however, the project manager is paid on the basis of a percentage of the contract sum, the risk becomes very real as does the potential for its falsification.

The trends within the Australian building industry which have led to reductions in fees for professional consultants have been discussed in Chapter 6. The reasons for these changes are
numerous and many are complex in nature. Perhaps the most common perpetuator of this situation is the progression of project management and other fast track project delivery systems. These have led to a situation where the architect, and other design professionals, have been relegated to a secondary managerial position. This position often does not fully utilise their expertise and is, therefore, a wasted resource.

Project managers often put forward the argument that since architects and others are not required to provide full services, their fees can be reduced accordingly. Although there is nothing untoward about this in theory, the reality of current practice shows that these professionals are generally called upon for extended services - without comparable remuneration. An added problem exists if the project manager has agreed with the proprietor an all-inclusive fee for services prior to the design professionals’ fees being confirmed. The situation which can then arise is that the project manager is in a position, and highly motivated, to negotiate down the design professionals' fees such that this remaining remuneration is greater. This practice can, and often does, extend beyond the engagement of consultants to other participants such as sub-contractors. It is unlikely that project managers themselves would freely admit to this action, however, general discussions with members of the architectural profession and other building industry participants reveal that such practices do exist.

The responsibilities and liabilities of the parties depend upon the relationships that exist between them. The architect does not generally work for the “true” client, but does work for the project manager. There are two situations which commonly exist regarding the engagement of architects and other design consultants. In the first instance, the architect or other design consultant, are responsible to the project manager. That is, even though they may not be engaged in traditional services or as part of a traditional system of project delivery, they are nonetheless equally liable for the work they perform. Likewise, any contractors or sub-contractors engaged on a project are responsible to the project manager. Consequently, even though the project manager claims to offer “single line responsibility”
to the client, liability extends beyond that participant to the design professionals, contractors and sub-contractors. It is channelled through the web of relationships and sub-contracts until it rests with the person or organisation beyond which it cannot be distributed. Secondly, the alternative to this situation is one where the project manager has recommended the selection of various consultants and contractors together with establishing their respective fees and charges, but they are engaged directly by the proprietor. In this instance, the project manager manages the design and construction process and the responsibility of these participants goes directly to the proprietor with whom contracts have been entered into.

A diagramatic explanation of the project management system can be seen in Figures 7.4 and 7.5 respectively (refer overleaf).

7.3 DESIGN/CONSTRUCT

Design/Construct contracts are also referred to as "package deal" contracts, and can be defined (R.A.I.A. Practice Note PN 13, 1972) as:

...a single financial transaction under which one person or organisation...designs and builds a building to the firm order of another person or organisation [the proprietor], either including land or on the [proprietor's] land.

The design/constructor is generally neither exclusively a speculative builder, a developer, nor a traditional building contractor. That is, the design/constructor will develop, inclusive of design and construction services, a specific project for a specific client.

The design/constructor will normally assist in defining the Brief and from that point in time will undertake to provide a design concept, and subsequently contract documentation. The construction phase will generally begin prior to completion of full documentation, since one of the major advantages of such a system of delivery is that the design and documentation
Figure 7.4: Project Management Project Delivery System
- Alternative 1
Figure 7.5: Project Management Project Delivery System
- Alternative 2
stages overlap the construction phase. The consequence of this is that the overall development programme is reduced in comparison to a more traditional approach.

The Brief may be defined quantitatively by way of drawings and specifications or qualitatively on the basis of performance criteria. The first option is the most commonly employed, although the qualitative option has advantages with respect to components such as mechanical equipment (P. Harrland, personal communication, 2 April, 1992). An inherent problem exists with the quantitative option due to the programme time-reduction principle of the design/construct concept, while many participants within the industry would argue that the qualitative option has, in practice, limited application.

In a traditional system of delivery, design consultants such as architects are able to provide independent professional advice to the client or proprietor. In the design/construct system of delivery, however, the architect is not at liberty to consult directly with the client unless express authority from the design/constructor to do so has been given, but such authority is not usually granted. Maintenance of separation between the designers and the client is of considerable importance to the design/constructor. The main reason for this being that the design/constructor is at liberty to make alterations during the design, documentation or construction stages without the client being aware of such changes, since the client has never really had a clear definition of the proposed end product. This is particularly relevant if the design/constructor has acquired previously unaccounted for cost increases. In this case, there exists a great temptation to reduce quality and standards in order to recoup any losses. R.A.I.A. Practice Note PN 13 (1972) clarifies this situation by stating:

*THE RESULT IS THAT THE CUSTOMER ENTERING INTO A [DESIGN/CONSTRUCT CONTRACT] KNOWS PRECISELY WHAT HE IS GOING TO PAY, BUT DOESN'T KNOW WITH ANY PRECISION WHAT HE IS GOING TO GET FOR HIS MONEY.*

A major advantage of the design/construct system is claimed to be that the design fees component of the project are "free". This is, in fact, not the case at all since the value of the design fees is merely priced into the overall cost of the project as opposed to them being
separately itemised and accounted (D. Black, personal communication, 6 November, 1991). Astute clients will realise that this is the case, but nonetheless other clients actually believe the claim being made and thus feel they are somehow "getting a bargain". This situation only assists in devaluing the worth of the involvement of design professionals in the building process. This applies to the nature and quality of the services they provide as well as the financial value attributable to those services.

7.3.1 Guaranteed Fixed Maximum Price

An advantage of the design/construct system is the guaranteed fixed maximum price. The price is negotiated at the design development stage, before design or its associated documentation has been finalised. Therefore, it is inevitable that the price carries with it an element of risk and that risk is accordingly costed into the price. The resultant price is one which is determined by what the market will bear.

The offer is not competitive in the truest sense and, therefore, it is often difficult to accurately check the price. Also, once a price has been given, any changes made to the design and/or the Brief by the client will have a tendency to negate the guarantee and in most instances cost increases will result. Decreases in cost are not common.

7.3.2 The Negotiated Contract

A negotiated contract is similar in principle to the standard design/construct contract. The difference is the negotiated contract provides for the appointment of independent design professionals who are engaged by the client, but work in association with a selected builder. Under this system, a guaranteed maximum price is established. The main advantages of this method are that the client has direct contact with the design team and, therefore, their interests can be better served. Likewise, the designers gain the advice and expertise of the builder with respect to buildability considerations, ensuring that the client is given the best
product for the cheapest price within the shortest possible time frame.

The design/construct system of project delivery, by its nature, is unsuitable for very large or complex building projects. The main reasons for this being that design and documentation are not finalised prior to construction commencing, and the design/constructor is not subjected to the rigors of competition. It is most suitable for simple structures such as non-complex industrial and warehouse buildings where the use of uncomplicated construction techniques can best be employed. A diagramatic explanation of the design/construct system can be seen in Figure 7.6 (refer overleaf).

7.4 CONSTRUCTION MANAGEMENT

The term “construction management” essentially means the management of a project during the construction phase, although experience has shown that this system of delivery may also be employed during the design stages. The system was first developed in the United States of America. The construction manager takes over the role of the builder, but unlike the builder simply manages the process of construction, and does not guarantee completion on time or within budget. Construction managers do not require any formal training, however, they are often trained in other areas such as architecture, engineering, quantity surveying and building. With regard to the Australian context, Cooke (1989, p.213) warns:

*There would obviously be effects on liability and professional indemnity insurance if an architect or engineer acting as a construction manager guaranteed time and cost performance, but it would not be possible to avoid liability for negligence or breach of contract merely by assuming no responsibility for the performance of contractors. The obligation to provide advice...with due care and skill would remain. Any construction management advice may be outside the scope of professional services covered by an architect's or engineer's professional indemnity insurance policy.*

The construction manager is not normally responsible for cost guarantees, and unlike the builder does not have to bear cost variances. This risk is borne by the proprietor and the individual contractors respectively. The construction manager will generally be paid an all-
Figure 7.6: Design/Construct Project Delivery System

```
Financier
  Finance Contract
  PROPRIETOR
    Design/Construction (Head) Contract
    DESIGN/CONSTRUCTOR (BUILDER)
      Construction Sub-Contracts
      Specialist Consultant Contract
      Design Sub-contracts
        Sub-Contractor
        Sub-Contractor
        Sub-Contractor
        Design Consultant
        Design Consultant
        Design Consultant
        Specialist Consultant
```
inclusive fee for services rendered irrespective of the project cost. Therefore, since there is no vested commercial interest in the final cost of a project, there is no incentive to increase the costs and subsequently gain from those increases. This situation may, of course, vary if the construction manager’s fee is based on the project cost.

The most important function of the construction manager is to "manage" the construction process. This is seen by many within the industry as being the antithesis of the traditional system. The provision of labour and materials is usually by way of trade packages. That is, the construction manager establishes a series of separate and individual contracts on the basis of trades. The contractual arrangements which exist in a construction management system of project delivery can follow a traditional or non-traditional path. These contracts may be between the proprietor and the individual contractors (the construction manager in this instance is not a party to the agreement). Alternatively, if the construction manager is acting as the proprietor’s agent, such contracts may exist between the individual contractors and the said manager. This is generally the more popular option since the proprietor is relieved of the need to sign a multiplicity of contracts.

The result of these contractual arrangements is that there is no "head" contract and subsequently no "sub-contracts" in the traditional sense. Therefore, the construction manager will not actually undertake the building work and in so doing will not hold responsibility for the performance of such building work. Figures 7.7 and 7.8 respectively illustrate the relationship between the various participants in two construction management scenarios (refer overleaf). If the construction manager arranges for items normally covered under "Preliminaries" clauses in a specification (e.g. site cleaning, workers amenities) and thus cannot be designated to any particular trade package, they will hold some degree of responsibility for them.

R.A.I.A. Practice Note PN 77 (1983) states:
Figure 7.7: Construction Management Project Delivery System
- Alternative 1
Figure 7.8: Construction Management Project Delivery System - Alternative 2

Diagram showing the flow of roles and contracts in the Construction Management Project Delivery System, including:
- Financier
- Construction Management Contract
- Proprietor
- Client/Architect Agreement (Design Contract)
- Principal Designer (Architect)
- Design Sub-contracts
  - Design Consultant
  - Design Consultant
  - Design Consultant
- Contractor (trade package)
- Contractor (trade package)
- Contractor (trade package)
A further development of the concept of separate contracts is that the various contract sums for them do not have to be determined before the start of construction as would be the case with sub-contract sums that make up a builder’s tender. They may be determined, by tendering or negotiation or otherwise, in sequence and at times as required. Some of the separate contracts may lend themselves admirably to the cost plus type of contract. All such considerations, of course, presume a high level of control on project estimate and budgeting which in any case is an absolute essential of any construction management arrangement because the overall responsibility for the total price is transferred from the traditional builder (excluded from the system) to one or more others, depending on the contractual arrangements and obligations.

During the construction stage, the construction manager will become involved in the following activities (R.A.I.A. Practice Note PN 77, 1983):

(a) Arranging contracts;
(b) Co-ordinating works of separate contracts;
(c) Arranging work which may be common to several contracts;
(d) Establishment and monitoring of programmes;
(e) Cost control;
(f) Arranging variations;
(g) Arranging permits;
(h) Inspection of the works;
(i) Payment and completion certification;
(j) Liaison with designers;
(k) Arranging shop drawings, samples, prototypes;
(l) Industry union liaison; and
(m) Issuing instructions to contractors.

Since the construction manager is effectively another consultant, advice may be given on an independent consultant basis. If, for instance, the design has been adopted but the preliminary budget estimate has been exceeded, the construction manager may recommend ways in which the design can be modified in order to reduce costs. Although such procedures may also need to be implemented in a traditional system, the method of such implementation varies in construction management. The integration of the design and construction stages is
sometimes referred to as “integrated construction management” (R.A.I.A Practice Note PN 77, 1983). Activities in which the construction manager may be engaged during the design phases include (R.A.I.A Practice Note PN 77, 1983) advice on:

(a) Site utilisation;
(b) Selection of materials;
(c) Alternative building systems;
(d) Building economics;
(e) Construction programming; and
(f) Documentation requirements.

The construction manager may also get involved in the tendering stage of a project, and offer advice on such matters as tenderer selection, conditions of tender and tender evaluation (R.A.I.A Practice Note PN 77, 1983). During tender, and indeed during the construction stage, the construction manager’s role can be organised such that it complements the architect’s traditional role. Provisions can be made whereby the construction manager undertakes some of the tasks traditionally performed by the architect. One such area of transferred responsibility is that involving the certification and contract administration of the project. In such circumstances, argue the proponents of construction management, the architect is able to increase the quantity or quality of services in other areas (e.g. design).

The factors associated with construction management are often considered to be similar to the principles of project management. There does exist, however, one primary difference between the two systems of project delivery. That is, in project management, the project manager’s role extends from project inception to project completion. On the other hand, the construction manager’s role is principally confined to the construction stage.
7.5 TURNKEY

A “turnkey contract” is one which may be defined as (Standen, 1981, p.240):

A design and construct contract in which the owner specifies the performance required of the completed project but leaves all the decisions as to design and construction to the contractor. On completion, the owner ‘turns the key’ and everything is ready and operational. Turnkey contracts are not uncommon in engineering contracts, especially industrial projects, but rare in building contracts.

This definition claims that turnkey contracts are rarely used for building projects, but it may be argued that this is not a true representation of the current situation. Although the turnkey method of delivery is not as commonly used as other systems, it is nonetheless implemented on a number of project types. The projects to which this system most often applies is that of international hotel developments. Turnkey developments have existed in other parts of the world, particularly South-East Asia, for the past decade or more. They have become popular with hotel chains such as Hyatt, Hilton and Sheraton. Essentially, the developments are undertaken and completed inclusive of building and civil works design and construction. Other provisions often include graphic design (signage, stationary), uniform design and total fitout comprising furniture, fittings, equipment, linen and tableware. The practice of delivering projects on a turnkey basis has extend to Australia, and is most common in the form just described. An example of this type of project is the Hyatt Hotel, Adelaide, South Australia.

7.6 NOVATION

The novation system of project delivery is one which has developed over recent years, although the concept of “novation” in itself is not new. Novation essentially means the transfer or substitution of obligations and/or any inherent risk. It can relate to part of a contract or alternatively a whole contract, and can occur at almost any stage during the duration of a project. The most common forms of novation contract in use in Australia today,
involve the novation of the design consultants from the original client to a builder during the design development stage (i.e. pre-documentation). Further detail is provided in Chapter 8.

7.7 DEPARTMENT OF DEFENCE

The Australian Department of Defence has recently developed its own set of standard forms of contract. Although these standard forms, of which there are five, are based on pre-existing methods of project delivery, particular consideration is warranted. This is primarily due to the relatively high level of capital expenditure for defence facility projects. Consequently, defence facility expenditure has a significant impact on the Australian building industry as a whole. This factor is further enhanced by moves within the defence forces bureaucracy (and therefore the public sector) to recommend and promote that these particular systems of project delivery and subsequent forms of contract be adopted and used within the wider Australian building industry (T. Moody, personal communication, 6 May, 1992).

Although each delivery system may be applied to both the private and public sectors, the Department of Defence has its own special set of criteria. One area of particular importance is that of security, in terms of the physical environment, communications and intelligence. It is, therefore, important that the project delivery system is able to cater for this stringent requirement. Another area of importance is the restrictive nature of defence force budget allocation and subsequent expenditure.

Essentially, defence facility projects are initially evaluated at a "macro" level of planning. That is, at a level which includes (Dept. of Defence, User Guide, 1992):

(a) Outset planning
   - definition of project scope
   - types, size and number of facilities
- location
- special facilities;

(b) Financing
- committed funds
- ceiling cost
- priority elements;

(c) Priority in project delivery
- cost, time, quality;

(d) Management
- internal resources
- delegation to outside professionals, including extent of delegation; and

(e) Risk management
- overall cost control programme
- insurance
- industrial relations.

Once the aspects associated with macro planning have been determined, "micro" planning can take place. Micro planning includes the following (Dept. of Defence, User Guide, 1992):

(a) Choice of project delivery system;
(b) Choice of form of contract;
(c) Tender procedures;
(d) Contract administration; and
(e) Management of claims.

Changes in attitude within the Department of Defence, with regard to project delivery systems, were aided by recent investigations into the Australian building industry (T. Moody, personal communication, 6 May, 1992). Ways of minimising risk and claims disputes were also considered, and reference was made to the Report by the NPWC/NPCC.
Joint Working Party "No Dispute: Strategies for Improvement in the Australian Building and Construction Industry". Attitudes are also becoming more commercial (Dept. of Defence, User Guide, 1992, p.3):

The Department in preparing the standard forms is signalling a new approach to business practices in contracting for the construction of Defence Facilities. The "deep-pocket" perception of the Department held in the industry is no longer appropriate or realistic. The Department now receives government approval to projects on the basis of a ceiling cost that cannot be exceeded. Cost management is thus crucial to the Department and requires implementation of management procedures from tender stage through to completion of the construction phase. Projects must be brought in on budget.

The five standard forms of contract which were developed are as listed below:

(i) Head Contract;
(ii) Trade Contract;
(iii) Design and Construct;
(iv) Document and Construct; and
(v) Managing Contractor.

Consideration will be given to each form of contract, which represent a respective method of project delivery. The nature of the discussion diverges somewhat from that given previously in this chapter. However, since the project delivery systems themselves have already been deliberated, specific aspects associated with each particular system will be discussed. The discussion centres around several key issues. These include identification of the aspects of particular significance to defence facilities contracting, the development of key innovations within the standard forms and common to most of them, identification of the advantages and disadvantages of a given delivery system with regard to its appropriateness for particular projects, risk analysis, and identification of some optional provisions.

The term "risk" can be defined as 'the possibility of loss in a situation in which the actual outcome lacks certainty but the probability of occurrence is predictable' (Dept. of Defence,
User Guide, 1992, p.4). Construction contracting is essentially about risk and transference of that risk. Risk allocation, therefore, will be the main determinant of the choice of project delivery system and ultimately the form of contract to be used. Once risk relationships have been determined and contracts entered into, risk management may be implemented. However, acceptance of risk allocation will carry with it an associated cost. That is, if risk is primarily taken by one party such as the builder for instance, then a monetary allowance for that risk will be added to the contract sum. The greater the risk, the greater the “insurance” against that risk.

Like risk, other factors such as tendering procedures will have an inherent bearing on the project's cost and the management of that cost. The method of tendering, therefore, has an impact upon the project delivery system chosen. When investigating methods of tendering, consideration should be given to the manner in which an offer is formulated, together with the risks that may or may not have been determined or assumed. It should be remembered that failure to adequately cost risk may initially result in a lower offer, but may lead to future default by the successful tenderer. This, in turn, has major cost and time implications for the proprietor, in this case, the Department of Defence. The Department of Defence has also been influenced by other developments within other areas of the Australian public sector, and has lead to identification of advances in public sector contracting generally. The following discussion relates to some of the primary aspects.

It is important to develop and promote a method of “early warning” provisions. That is, methods by which potential claims and/or disputes can be dealt with in order to reduce the probability of same festering or escalating. Therefore, there is a need to identify such situations and a mechanism must exist whereby the situation can be dealt with fairly and within a reasonable period of time. This has benefits for both parties. With respect to the proprietor, resolution of claims and/or disputes will generally mean an elimination or at least reduction in associated costs. On the other hand, the builder is capable, in the case of making a successful claim, of obtaining additional money due at an earlier date thereby
assisting the cashflow situation.

With regard to extra costs associated with variations, the Department of Defence claims that it has "special needs" (Dept. of Defence, User Guide, 1992, p.8):

...the Department requires a wide power to add to the scope of the work...[and] the Department requires a wide power to omit work. This power is required because:

(a) security on some projects may dictate that sections of work which become security sensitive because of the timing of the work or other changed circumstances be omitted and performed by persons with requisite security clearance; and

(b) of the need to control out-turn cost by omitting non-priority elements of the work where claims made by the Contractor have the effect or are likely to have the effect of exceeding the budget committed to the project.

Variations are valued by way of a schedule of prices. The standard forms do not provide for bills of quantities. Provisional sums are provided for when there is a need for overlap between the design and construction phases. Obviously, the provision of same depends upon the project delivery system employed and the form of contract utilised.

The management of risk aforementioned covers aspects such as risks associated with latent conditions. The builder is able to claim compensation for latent conditions or in cases where endeavours to minimise the effects of such conditions have been made. There is a time limitation associated with the notification of such conditions, and failure to notify in the applicable time frame will negate the claim.

Due to the security issues discussed previously, the Department of Defence retains the right to reject any "domestic" sub-contractor or supplier. The Department is not obliged to give the builder a reason for such rejection.

Dispute resolution is an aspect of contracting which has altered over recent years in particular, and more emphasis is being place on alternative methods of resolution. The
Department of Defence claims (Dept. of Defence, User Guide, 1992) that the greatest potential for disputes relates to certification and the procedures associated therewith. Their standard forms of contract allow for such disputes to be dealt with by an “adjudicator” in the first instance, and failing that by reference to the arbitration system. With respect to disputes or differences not relating to certification, their procedures are outlined thus (Dept. of Defence, User Guide, 1992, p.12):

...in the first instance [they are] to be dealt with by representatives of both parties uninvolved with the site administration and having the authority to commit to a settlement arrived at by negotiation. In the event of a dead-lock in the negotiations the parties may agree to involve a third party facilitator in whatever mode of alternative dispute resolution procedure is best suited to the nature of the particular dispute.

Failing final resolution...by the mechanisms referred to...either party may resort to arbitration. The right to refer a dispute to arbitration is not subject to time limits.

The issue of identifying “key personnel” in tender negotiations is considered very important by the Department of Defence (Dept. of Defence, User Guide, 1992, p.13):

...breach of the Contractor’s obligation to provide and maintain key personnel identified in tender negotiations gives rise to a right in the Department to terminate the contract forthwith in the Managing Contractor General Conditions and a right to terminate in the other standard forms where the Contractor fails to show cause in respect of the failure to comply with this obligation.

The Department of Defence has endeavoured to formulate agreements between project participants who may not normally be in a direct contractual relationship, in terms of a building contract, with the Department. This includes sub-contractors and consultants. These particular agreements are termed “collateral deeds”, and since these participants are not party to the agreement between the builder and the proprietor (the Department), separate insurance cover for services or work done needs to be implemented. This is achieved by way of a “deed of covenant”. The Department of Defence “User Guide” (1992, p.14) states:

The Consultant and Sub-contractor Deeds of covenant bring the Department into direct contractual relationship with Consultants and Sub-contractors employed by Contractors.
Consultants warrant to the Department that in designing the project or elements within the project they will exercise due care and skill. Sub-contractors warrant to the Department that they will carry out the sub-contract works in a thorough and tradesmanlike manner using good quality materials which are fit for their purpose. The Department, by virtue of the contractual relationships created by the Deeds, is in a position to commence an action directly against Consultants or Sub-contractors for defects in a project resulting from breach of the warranties contained in the Deeds. In this manner the Department has a remedy directly against the party at fault...

The standard forms of contract which have been developed by the Department of Defence are highly dependent upon the choice of delivery system. Likewise, the choice of delivery system relies upon several factors. These include (Dept. of Defence, User Guide, 1992):

(a) Nature, size and complexity of the construction project including whether it is of a building and/or civil works character;
(b) Budgetary constraints and in-house management control;
(c) Potential changes in political and/or Departmental priorities;
(d) Anticipated degree of overlap between design and construction phases including requirements for programme reductions;
(e) Availability of suitable in-house personnel or need to engage outside professionals;
(f) Risk allocation re design, cost and time; and
(g) Project programme including overall time frame, staging and elemental packaging.

A brief overview of the types of Department of Defence standard forms of contract follows.

7.8.1 Head Contract

This can be considered a traditional project delivery system and is the one which has been historically preferred by the Australian public sector. It involves the engagement of consultants by the Department of Defence to design a given project and call tenders therefor. Tenderers are called on a competitive lump sum or schedule of rates basis after the design has been completed. Construction is executed in accordance with the documentation as
completed. The consultants used will either be in-house personnel or outside professionals and are also engaged to superintend the construction phase including certification of extensions of time, progress payments, variation valuations and final certification. The builder engages sub-contractors and suppliers to execute the work, usually on a trade by trade basis. The builder is liable for any work executed by the sub-contractors or suppliers.

This system of delivery is utilised where (Dept. of Defence, User Guide, 1992):

(a) The Department requires maximum control over design and so wishes to engage and manage the consultants directly;

(b) Detailed design documentation is completed well in advance of calling tenders;

(c) Experienced personnel are available to manage and co-ordinate provisional sum work;

(d) The Department can provide its own or outside consultants to superintend the works during construction and administer the contract;

(e) Design and construction phases need not overlap other than for provisional sum requirements;

(f) No changes in the scope of the work are predicted other than for cost management reasons; and

(g) Few variations to design due to design deficiencies, documentation or changing end-user requirements are anticipated during construction.

Although it is recognised that this system of delivery has the potential for risk associated with design deficiencies, poor documentation and buildability problems which can result in cost blow-out, precautions have been taken (Dept. of Defence, User Guide, 1992, p.18):

To avoid or at least minimise the major areas for additional payment Design Consultants engaged by the Department must have buildability knowledge, be fully briefed on end-user needs (and those needs should be firmed up during design stage and have the support of the Department to freeze those needs to avoid variations during construction), and produce a fully documented design subject to quality assurance procedures prior to the calling of tenders...
The procedural steps involved in implementing the Head Contract system of delivery (Dept. of Defence, User Guide, 1992, p.20) are illustrated in Figure 7.9 (refer overleaf).

7.8.2 Trade Contract

The Trade Contract is a form of contract which utilises a project management system of delivery. In this instance, the Department engages an agent to provide management services for the co-ordination of the interconnection between design and construction and of the construction phase itself, on a fee for service basis. As an agent for the Department, the project manager assumes little risk associated with design and construction. It is the Department who contracts directly with trade contractors on the Trade Contract standard form and, therefore, assumes the risk of co-ordination of such trade contractors together with the design risks applicable to the traditional contract structure.

This system of delivery is utilised where (Dept. of Defence, User Guide, 1992):

(a) A high potential exists for overlap of design and construction phases due to factors such as reduction in programme time and/or need for design adjustments during construction;
(b) There is a need to cater for significant additions or deletions which would be uneconomic or inefficient with a more traditional system;
(c) Design and construction can be divided into discreet packages;
(d) Environmental or heritage factors negate any certainty in final design;
(e) A number of elements (e.g. wharf, accommodation, recreation) exist within the same site; and
(f) Due to the above factors, the calling of tenders on a lump sum basis is not possible or feasible.

The Trade Contract suffers from the same risks as the Head Contract in relation to increased
Figure 7.9: Department of Defence Head Contract Project Delivery System

**Steps in Use of Head Contract**

Choice of Traditional Delivery System Contractual Structure

- Engage Design Consultants
  - Design Consultants prepare detailed fully documented design (apart from provisional sum work)

Decide Head Contract Form

- Building Works
  - Lump sum
- Monthly Progress Payments
  - DB
  - Milestone payments
- Tenders called

Civil Engineering Schedule of Rates

- Tenders called

Entry into Head Contract

Engage Superintendent
cost for deficiencies in design documentation and variations within the trade packages let.


...there is a fertile area for dispute and claims in the high risk area of co-ordination of design as between the packages and co-ordination of a number of Contractors on the site to avoid delay and disruption to trades working concurrently or following on activities of other trades.

7.8.3 Design And Construct

The Department of Defence considers that the optimum delivery system for simple building work projects (e.g. barrack blocks, recreational facilities) is design and construct. However, unlike other forms of design/construct delivery, the Department of Defence still calls tenders as opposed to dealing with one organisation exclusively.

This system of delivery is appropriate where (Dept. of Defence, User Guide, 1992):

(a) The priority is best design for a given price;
(b) The Department has developed its own design Brief inclusive of concept design, performance specification and quality requirements, to such an extent that the final product coincides with their requirements and expectations;
(c) The Department requires tenderers to further develop the design concept to satisfy the Brief, prepare detailed design and documentation and construct and commission the project;
(d) The design Brief is expressed in such a manner that the resultant product may be judged against it;
(e) Negotiation details can be recorded so as to avoid the possibility of dispute over the builder’s interpretation of the design Brief;
(f) The Department elects to hand over control of the detailed design to the builder in exchange for itself assuming no risk associated with the design;
(g) Limited variations due to user requirements are anticipated; and
7.8.4 Document And Construct

This form of contract is a variant of the Design and Construct system of delivery. The Department of Defence considers this to be a more appropriate system of delivery than Design and Construct due to the existence of single line responsibility. That is, the builder is required to undertake full responsibility for all design completed prior to entry into the contract and assume responsibility for the design consultants who have prepared the design upon which the contract was let. This is essentially a form of "novation" contracting where the design consultants (together with their terms of engagement) are "novated" across to the builder.

This form of delivery is of greater advantage to the Department than Design and Construct since it provides for the development of a more definitive Brief. As a result of this increased definition, the Department has significantly greater control over the design of the end product. An obvious difference exists between the Department of Defence contract and other novation contracts, and this relates to the maintenance of variation and extension of time provisions. This particular form of contract is dealt with in greater detail in Case Study 5, Chapter 8.

Figure 7.10 (refer overleaf), illustrates the procedural steps involved in implementing the Design and Construct or Document and Construct system of delivery (Dept. of Defence, User Guide, 1992, p.27).

7.8.5 Managing Contractor

The Managing Contractor standard form is described as a new form of contractual arrangement combining the obligations for construction of the Head Contract with design
Figure 7.10: Department of Defence Document and Construct Project Delivery System

**Steps in Use of Design and Construct or Document and Construct**

1. Choice of design and construct delivery system
2. Design consultants engaged to prepare Design Brief
3. Design Concept with performance specification and quality criteria
4. Design Brief with details providing solutions to performance specification and quality criteria
5. Document and Construct
responsibility and features of the Project Management concept. This system of delivery is the optimum strategy where (Dept. of Defence, User Guide, 1992):

(a) The criteria for the project management structure are satisfied but the Department opts to share some of the risks associated with a major construction project;

(b) Large building organisations have the capacity to carry risks not normally attributable to project managers;

(c) Tenders are called on a lump sum basis as opposed to a fee for service principle as per project management; and

(d) The project and ceiling cost are of broadly defined scope with adjustments to the lump sum bid for preliminaries if scope changes due action by parties other than the builder.

It is claimed (Dept. of Defence, User Guide, 1992, p.27):

*The Managing Contractor strategy provides the Department with maximum flexibility in determining the elements to be included in a project and the design of those elements with the management of expertise of a contractor organisation to assist and advise in developing the design, co-ordinating the interface between design and construction, undertaking the construction and planning for and remaining within a target cost and target time for the delivery of the project.*

There are several principle elements of the Managing Contractor system of delivery. The Managing Contractor is the head contractor and is responsible for the design. The Managing Contractor engages the consultants and in so doing is required to exercise the same standard of care required of the consultants. This standard of care is not equivalent to that required of a Design and Construct builder. Engagement of the consultants involves them designing packages for letting of the construction work as well as other matters. The Managing Contractor administers the consultancy agreements, programmes the design work and co-ordinates the transition between the design and construction phases. During the design phase, the Managing Contractor has an obligation to provide advice on the preferred methods of design and construction techniques such that the best cost and time programme for each of the
packages can be achieved.

The Managing Contractor is required to manage the project in order to achieve completion on time within defined cost constraints, but is not subject to an actual fixed price or fixed time. Responsibility for sub-contract claims arising from the Managing Contractor's own inadequate performance remains with that party. The Managing Contractor's remuneration is based on a combination of items. These include (Dept. of Defence, User Guide, 1992): design costs plus an agreed margin; actual sub-contract costs; a fixed fee for preliminaries; and an agreed fee for off-site overheads and profit.

Figure 7.11 (refer overleaf), illustrates the risk allocation associated with the Managing Contractor system of delivery (Dept. of Defence, User Guide, 1992, p.29).

7.8 QUEENSLAND GOVERNMENT ADMINISTRATIVE SERVICES DEPARTMENT

In a move similar to that of the Australian Department of Defence, the Queensland Government Administrative Services Department has developed a series of standard form contracts for use on State government construction projects. They operate on a fast track basis and are known as "Design and Construction Management" contracts. As was the case with the section on the Department of Defence delivery systems, this system shall be considered in relation to the conditions of one of these particular contracts. Although the contract employs a delivery system which is similar to other systems described previously, it is regarded important to give due consideration to this case. The main reasons for this being that the Queensland government is continuing to expend funding on capital works projects at a rate greater than other Australian states. Also, since these contracts have been developed for use within a state government structure, its impact upon the Australian building industry generally cannot be ignored. The items under consideration are those which may be of particular interest to general discussion re this contract.
Figure 7.11: Department of Defence
Managing Contractor Project Delivery System
7.8.1 Design And Construction Management Contract

This form of contract operates on a design and construct basis together with operational methods associated with construction management.

(a) **TENDERING CONDITIONS**

Tenders are called on either an open invitation or elected tenderer basis, and are structured on a two stage tier. Stage One involves the submission of a completed tender form providing details of the project consultants, their services, associated fees, capability statement, and information regarding the names of relevant administrative and supervisory staff. Acceptance at Stage One results in progression to Stage Two. In Stage Two, tenderers are required to submit another tender form which provides details of construction costs (Tendered Construction Sum and Guaranteed Contract Sum), overall time programme, further information on consultants fees, and a "Development Proposal" as part of their offer. It includes the following information (Qld. Gov't A.S.D, Contract, 1990):

(a) A schedule of proposed sub-contract trade packages;
(b) A time programme (covering design, documentation, construction, commissioning);
(c) Projected cashflow;
(d) Architectural sketch plans of site, buildings, sketch elevations and sections, coloured perspective;
(e) Civil/structural schematic drawings;
(f) Sketch plans for all services;
(g) Finishes schedule;
(h) Schedule of services equipment (including brand names, model numbers etc);
(i) Room and other schedules;
(j) Details of sub-contract conditions;
(k) Details of consultant agreement conditions;
(1) Details of overall on-site organisation structure; and

(m) Specific times when administrative and supervisory staff will be on site.

In accordance with these requirements, each tenderer must prepare design and preliminary documentation to quite detailed standards in order to meet the initial tender conditions. In the case of the successful tenderer, any costs expended therefore can be recouped. However, for the remaining unsuccessful tenderers, such preparation cannot gain any remuneration. This means that tendering organisations and their associated consultancy teams must submit their offers on a speculative basis. By agreeing to submit offers under these conditions the tendering organisations and their consultants are actually signalling to the Department that they are willing participants in this mode of practice. The Department, in turn, is taking advantage of not only this situation, but also the conditions which currently exist in the building industry as a whole.

Increased competition for comparatively fewer jobs has meant that organisations and individuals alike are prone to contest proposed projects on a no or minimum charge basis. While this may appear to be financially beneficial for the proprietor in the short term, the long term consequences are yet to unfold. One result which is inevitable and which has surfaced on other projects throughout Australia, is that the quality of design, documentation and construction services will fall ("No Dispute", 1990, p.67): 'A view has been expressed that the quality of documentation has been reducing over recent years with a lowering of the level and detail of documentation standards'. In the end, it is the consumer, end user and/or community who will be disadvantaged. Likewise, the continuation of such speculative practices will be detrimental to the design consultants and constructors collectively, since services cannot continue to be provided without consideration (payment). The contract also requires that the project consultants be engaged to provide the following services:

(a) Architectural services (preparation of Development Proposal);

(b) Civil engineering services (preparation of Development Proposal);
(c) Services engineering services (preparation of Development Proposal); and
(d) Quantity surveying services (preparation of "Elemental Summary").

The contract makes specific reference to the use of project consultants. Some of the tenderers' obligations have already been mentioned, but they are also required (Qld. Gov't A.S.D, Contract, 1990) to:

(a) Accept any consultants that the proprietor may nominate;
(b) Engage consultants to provide any services in addition to those listed in the contract; and
(c) Base consultants fees on fee structures applicable to the Queensland Government Administrative Services Department.

(b) **CONDITIONS OF CONTRACT**

This form of contract provides for the appointment of a “manager” who is bound to execute the work under the agreement. The manager, who is effectively the head contractor, has a series of obligations which are applicable through the various stages of the project’s development. These are listed below (Qld. Gov't A.S.D, Contract, 1990):

Design and Documentation

(a) Accountability for the design and documentation of the works in accordance with the agreement. Liability to the proprietor is the same as if the manager were the architect and contracted separately to the proprietor;
(b) Sole responsibility for consultant co-ordination and management;
(c) Sole responsibility for standards of workmanship and materials; and
(d) Accountability for changes without proprietor's approval.
Construction

(a) Accountability for execution of works in accordance with the agreement and statutory requirements;

(b) Provide everything required to execute the works (including sub-contracts); and

(c) Sole responsibility for co-ordination of sub-contractors.

Commissioning

(a) Responsible to proprietor for commissioning.

The manager's responsibilities include the control, co-ordination, supervision and direction of all activities necessary for the execution of the work under the contract. This applies to all stages, namely, design, documentation, construction and commissioning.

The contract provides for a "project control group". The group consists of three representatives of the proprietor and of the manager and one representative of the end user (client). The role of the project control group is to meet regularly and receive and consider all reports and other information. The group then makes, gives or endorses approvals, acceptances, directions and other decisions on behalf of the proprietor.

The contract specifies the services which the consultants are required to provide under the agreement upon engagement by the manager. The manager is required to enter into a written agreement with each project consultant and is responsible for payment of all their fees. The services include (Qld. Gov't A.S.D, Contract, 1990):

Architectural, Civil Engineering, Services Engineering

(a) Design development;

(b) Preparation of preliminary working drawings;

(c) Preparation of sub-contract documentation;

(d) Furniture layouts (architectural);

(e) Review and recommendation of sub-contract tenders;
(f) Quality and progress inspections of works;

(g) Provision of "as constructed" documentation; and

(h) Assistance to manager in commissioning of mechanical/electrical services (services engineering)

Quantity Surveying

(a) Preparation of bills of quantities for all subcontracts; and

(b) Review and recommendation of sub-contract tenders.

The project consultants are responsible to the manager for any work for which they have been appointed. The manager, in turn, is responsible to the proprietor for such services as provided by the consultants. The manager cannot terminate a consultant's appointment without approval of the proprietor. The proprietor is at liberty to appoint additional consultants to monitor the design development, review sub-contract budgets and check variations, progress claims, extensions of time claims and certificates. Costs of such appointments are borne by the proprietor.

The contract provides for a variety of different costing mechanisms. They include the "Tendered Construction Sum", the "Guaranteed Contract Sum", the "Actual Cost of Construction", the "Actual Contract Cost", and the "Adjusted Guaranteed Contract Sum". The Tendered Construction Sum comprises a total of the estimated costs of constructional elements as tendered, plus the tendered fixed lump sum for on-site overheads and preliminaries and the tendered fixed lump sum for off-site overheads and profit. The Guaranteed Contract Sum is the total of the tendered construction sum plus the tendered fixed lump sum for the manager's design, documentation and commissioning fees, and the tendered fixed lump sum for the consultants' fees. The Actual Cost of Construction is defined as the total of the cost of sub-contracts and the tendered fixed lump sums for on- and off-site overheads. The Actual Contract Cost is the total of the Actual Cost of Construction, the tendered fixed lump sum for the manager's design, documentation and commissioning fees,
the tendered fixed lump sum for the consultants’ fees, and any valid claim for the manager.

The Adjusted Guaranteed Contract Sum means the accepted Guaranteed Contract Sum adjusted as a result of approved variation adjustments, valid claims, and proprietor incurred costs.

With regard to these costing structures, the manager undertakes a guarantee that the proprietor is not liable to pay more than the Adjusted Guaranteed Contract Sum. If, however, the Actual Contract Cost is less than the Adjusted Guaranteed Contract Sum, the manager is entitled to be paid a bonus equal to twenty percent of the value of the difference.

Under this form of contract, the manager is entitled to claims for extensions of time and variation orders. There are, however, time constraints and certain applicable conditions which must be observed by the manager in order for such claims to be considered valid.

There is an express condition associated with final completion and certification thereof. The contract (Qld. Gov’t A.S.D, Contract, 1990) states:

*The issue of the Final Certificate shall constitute conclusive evidence that all work under the agreement has been finally and satisfactorily executed by the Manager...*'

This form of contract, like many others, provides for procedures in the case of a dispute arising. The first course of action is for the dissatisfied party to notify the other party in writing. If the matter cannot be resolved through negotiation it is referred on to the General Manager, Building Projects Group, Queensland Government Administrative Services Department. If this action fails, the next step is to go to arbitration.

In summary, it can be seen that this form of contract and, therefore, this system of project delivery is similar yet different to other systems. The overall approach of the manager being responsible for undertaking design, documentation, construction and commissioning is not unlike other standard design and construct systems. However, the risks associated with these responsibilities and obligations appear rather one-sided in the proprietor’s favour. The
other issue mentioned earlier re the services expected of design consultants during the
tender stage is, many would argue, a point of contention and one which not only leads to the
further demise of the professions concerned but also promotes inadequate service the
consequence of which is poor design.

7.9 FAST TRACK

"Fast tracking" is essentially any system of project delivery which (Standen, 1981, p.104):

...decreases the time which would normally be consumed by the linear method of project delivery, e.g., by overlapping the design and documentation phases or by commencing construction before documentation is complete or before a firm price is available.

Therefore, delivery systems such as design/construct and project management often employ fast track methods. The main objectives of this system are to reduce project costs and time.

With respect to costs, they can involve a series of different factors. The primary one being the effects of inflation. That is, by reducing the overall project development time, the effects of inflation can be minimised. This applies not only to the actual construction cost inclusive of labour, plant and materials, but also to any financial funding that may have been obtained for the project. Funding is affected since a reduced time frame will result in the payment of less interest on borrowings, minimisation of potential for refinancing, and reduction in any rise and fall conditions which may apply.

The effects of a reduced time frame vary for different developers. The most evident of these are reductions in holding charges and financial costs, increased leasing opportunities and reduced labour costs. One scenario provides for the developer being able to place the completed property development on the real estate market for sale. A quick sale would mean
money expended on borrowings could be recouped early thereby reducing loan commitments. In the case of a developer supplying the market with a suitable or needed development prior to that of a competitor, the potential for an early sale would be increased.

The same circumstances apply to a developer who wishes to lease a development. That is, if the arrival on the leasing market of this project precedes that of a competitor, this property would have the potential to lease first (provided that it is what the market demands at the time). Likewise, if the proprietor already has a lessee committed, it may be of particular importance that such lessee is able to occupy the premises on or before a specified date. This is particularly relevant when considering the retail sector which relies heavily on certain “peak” trading periods, or a sporting or entertainment venue which may have events secured in advance. The effects of early leasing are that this income can be used to counterbalance any borrowings undertaken for the development of the project initially.

Another scenario involves a developer who is also to be the future occupier of the development. In this case, early occupation would lead to the developer occupying the premises within a minimum period of time. If, during the construction period, the developer leased other premises, such lease commitments could be reduced thereby reducing costs and expenditure. Likewise, if the developer occupied their own premises during this time, such premises could either be sold or leased out once vacated. This, in turn, would create another source of income for the developer.

The fast track project delivery system originated in the United States of America in the 1970's, and was born out of a need to offset huge increases in that country's inflation rate, interest rates and general capital growth. A review of fast track projects by the General Services Administration of the United States of America indicated that the results were not always favourable. The findings were summarised in a paper prepared by John Curtis entitled “Current Trends in Contracting in the Construction Industry” (August 1990). The American experience reportedly concluded:
“Construction management and fast track were found to be unsatisfactory on public building works in the United States. When GSA [General Services Administration] adopted construction management with fast track in the 1970’s it hoped that these methods would save 1.5 to 2 years construction time on large projects. But problems arose, including:

- the government owner could not delegate the same amount of authority that is given to the construction manager in the private sector. Lack of authority and divided responsibility prevented effective control and management of the jobsite by the construction manager. There was an increased risk of government liability...
- the construction manager firm’s lack of authority meant that it could not be held financially responsible for the project and its outcomes...
- there was an increased risk of government liability...
- the harmony among the team members...that had been hoped for died upon the signing of the contracts...”

The review revealed that the government’s exposure to liability for delay claims increased under a fast track system. This was because of the need for increased resources to administer a series of contracts as compared with the resources required to administer one contract in a more traditional system of delivery. The review then summarised that (Curtis, Paper, August 1990):

...the GSA’s experience generally showed that the use of construction management and fast track involved risks which had a severe impact on project completion time and ultimate costs. The method did not yield the same benefits to government that it did to the private sector.

As a result, the American approach has now altered somewhat. In the 1980’s the method of use of construction management and fast tracking changed on public projects such that projects are now bid for on a competitive lump sum basis by general builders who execute the construction work under the supervision of the GSA (Curtis, Paper, August 1990). Another viewpoint exists that the construction management system is still employed on some projects. Cooke (1989, p.213) states:

...the General Services Administration Public Buildings Service in Washington, D.C. has taken the decision to appoint a construction manager on every project with a budget of $US5 million or more and to abandon the traditional design-bid-build process. In so doing it has devised a system which breaks with tradition without overlooking the need for public accountability by a federal authority.

Further to the above, it can be argued that although the fast track system has its advantages,
disadvantages also exist. The pros and cons, therefore, need to be assessed in relation to the nature and project typology proposed. Fundamental to this assessment are issues such as liability and, perhaps more importantly, accountability for that liability. It is within this area of consideration that prospective proprietors need to exercise the greatest caution. This is of particular relevance to government authorities who utilise public funds.

7.10 SUMMARY

As can be seen from the above discussion, there are numerous project delivery systems currently in use in Australia today. These systems range from the traditional method which maintains a strong client/architect relationship throughout the design, documentation and construction phases to a variety of fast track methods in which the builder and/or manager maintain significant control.

Despite the differences which may exist between each of the systems, a common thread prevails. This is based on the law of contract (refer Chapter 4). It is evident, from previous discussion, that each of the systems of delivery considered broadly fit the same contractual description. Therefore, it may be argued that the differences exist in respect of the roles of and relationships between the various participants within any given system, together with the means that determine them (i.e. the contract and associated conditions of contract) as opposed to the manipulation of contractual law itself.

When investigating the various methods of delivery, consideration needs to be given to the success or otherwise of such systems. That is, do the advantages which may be claimed and promoted for any one system correspond with the outcome? It is true that short term advantages may exist for the variety of fast track systems available. This may apply to design/construct, construction management and project management methods of delivery, all of which claim to reduce the overall development time (including lead time) while achieving
an end result for an asserted minimum cost. Together with this is a perceived or real reduction in the number of lines of responsibility. However, the long term effects of choosing a particular delivery system should not be ignored. One of the major areas of concern is associated with design and the quality of that design. That is, design in terms of aesthetics, but perhaps more importantly, in terms of quality of physical product. It is the community who pays for bad design and inefficient or inappropriate systems of project delivery: payment in terms of a mediocre environment and long term financial ramifications such as increased energy consumption, maintenance costs and costs associated with the need to rectify existing facilities or provide new ones because those built initially are inadequate or inflexible for future needs.

The approach taken by the developers of buildings (the proprietors) will depend largely upon the nature of these participants. That is, if a proprietor is also going to be the building's occupier, there is a greater chance that attention will be paid to long term consequences of decisions, since decisions made will have an effect upon the decision maker in the future. If, however, the proprietor is involved in the building process for speculative reasons or other short term interests, then issues such as early completion time and minimum cost attain the highest level of priority. It becomes evident, therefore, that the various project delivery systems in use today have developed as a result of a combination of factors. These include market demand, political policies and legislation, changing community attitudes and changes within the Australian building industry collectively. Responsibility for a better building industry in the future, both in terms of operational procedures and quality of output, relies upon the co-operation of the participants within it. This includes design professionals, proprietors, builders, sub-contractors, government institutions and the judiciary, since it is these participants who ultimately 'control' building development in Australia.
Chapter 8: NOVATION

This chapter investigates the "Novation" system of project delivery. Discussion encompasses the definition of the term novation and its history, underlying principles, effects upon the participants and its use within the Australian building industry. Novation is also considered with respect to its application in various case studies.

8.1 DEFINITION

The term "novation" is defined (Standen, 1981, p.165) as:

Substitution, by agreement of all concerned, of a new obligation for an old one or of the new set of obligations for an old set. A whole contract may be subject of novation, in which case the new one is a contract of novation and has the effect of extinguishing the old one. It may be between the original parties or with one new party replacing one of the original parties. In the latter case, the new contract must be a tripartite agreement.

In relation to the building industry, novation involves the transfer of consultants' responsibility, conditions of engagement and professional duty of care from the proprietor to the builder, at a specified point in time, usually upon the letting of tender.

8.2 HISTORY

The concept of novation is not a new one and, in legal terms, dates back to the development of Roman civil law. Its historical use in relation to building contracts is obscure. With regard to building, it has not been a formerly recognised system of project delivery or contracting until this Century. Its use within the Australian building industry has been relatively
limited, and although it may be claimed that it has been used for the past four decades,
(Fisher, Engineers Australia, 17 April 1992):

Over the past ten years our company has completed seven major projects in Sydney adopting this “new” method, and... personnel from the company have been involved in major projects with similar contractual arrangements in a timeframe spanning over forty years.

it is not until recent years that novation has gained recognition and acceptance as an independent project delivery system.

A system of delivery similar to novation developed in the United Kingdom in the early 1980's. The British system was called the “British Property Federation System for Property Design and Construction”. The British Property Federation is a body whose nature and composition may be considered equivalent to that of the Building Owners and Managers Association of Australia Limited (B.O.M.A.). The British Property Federation (BPF) System was effectively split into five stages, namely:

(a) Concept stage;
(b) Preparation of Brief stage;
(c) Design development stage (incorporating a transfer/substitution of responsibility);
(d) Tender documentation and tendering; and
(e) Construction stage.

The BPF System was summarised in a Paper by Mr. George Earl entitled “Critique of the British Property Federation System for Property Design and Construction” (28 April, 1990):

In simple terms the system is designed to change attitudes, produce good buildings more quickly and at a lower cost, alter the way consultants and contractors deal with each other, remove the overlap of effort between consultants and contractors, redefine the risks of commercial success, reestablish awareness of real goals and eliminate practices that absorb unnecessary effort and time and obstruct progress towards completion. This is achieved by closer attention to the way decisions are made by way of better management and thought processes from the outset of the project.
The BPF system...“unashamedly puts the client’s interests first”. As in all systems it requires competent designers and contractors to have a successful conclusion.

The reasoning behind it mirrored that of fast track methods in Australia. The early 1980's was a time of so-called “Thatcherism” in the United Kingdom, and the British building industry was undergoing significant changes, especially in respect of industrial reform. Their economy was also experiencing change and there was a general increase in the quantity of building development being undertaken. Builders did not find themselves in a position to have to compete for projects and, consequently, many were not willing to undertake work with an increased level of responsibility and liability that was inherent in this new system being promoted. Adoption and acceptance of the system was not, therefore, particularly widespread at the time.

The experience suggests that the introduction of a novation system of project delivery is highly dependent upon the current circumstances influencing the building industry and the economy generally. Inherent in a novation system of delivery is the principle of single line responsibility. For this reason, novation is often considered to be a derivative of design/construct methods. Design/construct and other fast track methods of delivery were born out of a desire by clients to “simplify” the building process, re-distribute responsibilities and a general dissatisfaction with traditional methods of project delivery. This was, at the same point in time, reinforced by moves from within other sectors of the Australian building industry to promote alternative methods of delivery.

8.3 SYSTEM SELECTION CRITERIA

Before consideration can be given to the process of novation, it is important to understand the reasoning behind a proprietor choosing to use a novation system of project delivery as opposed to another method.
Reasons why a proprietor may elect to employ a method of project delivery such as novation include:

(a) The need and/or desire to procure a building within a reduced time frame (as compared with a traditional method of delivery);
(b) Maintain a greater level of control over design matters;
(c) Guarantee a standard of design and physical product which corresponds with the initial intentions, desires and needs of the client;
(d) Achievement of quality commensurate with money expended;
(e) Maintain a minimal, preferably single line of responsibility inclusive of consolidated risk transfer and managerial control;
(f) Desire to employ competitive tendering procedures;
(g) Maintain some degree of flexibility within contractual structure to allow for changes or alterations to be made by the builder provided the integrity of the design is maintained;
(h) Negate variations unless expressly requested or caused by the proprietor; and
(i) Negate extension of time claims.

8.4 THE NOVATION PROCESS

The novation process of project delivery incorporates the following stages:

(a) Brief development;
(b) Conceptual design;
(c) Design development;
(d) Tendering;
(e) Acceptance of offer;
(f) Novation of consultants to successful tenderer (effective transition stage);
(g) Completion of design and documentation commensurate with design Brief;
(h) Construction; and
(i) Post-construction and commissioning.

8.4.1 Brief Development

The development of an adequate design Brief is an aspect which has been less than successful, in terms of detailed requirements, in standard design/construct projects. As a result, it is not uncommon for the proprietor of a design/construct contract to be delivered of a project which does not fully meet their requirements and needs. The main disadvantage of this form of contract is that the proprietor has no guarantee of the quality of the final product, since the primary control for design, documentation and construction rests with the builder. A definite need exists, therefore, for the development of a well defined Brief, both in terms of scope and quality. In novation contracting, conscious attempts are made to produce such a Brief.

It is during this Brief development stage that the proprietor can take one of three possible options. The first relates to Brief formulation in conjunction with a design professional, generally an architect. The relationship which exists between the proprietor and the architect is the same as that in a traditional client/architect arrangement (refer Chapter 7). That is, the architect is commissioned by and, therefore, enters into an agreement with the proprietor to undertake design work for the project. Inherent in this task is a need to establish the Brief and define its requirements which is duly done.

The second option relates to Brief formulation by the proprietor in conjunction with a project manager. In this instance, the project manager prepares most of the documentation and may make decisions regarding content. The project manager, therefore, is responsible for the interpretation of the proprietor's needs. Discussions may also be held between the project manager and the design consultants during this stage.
The third possible option which may be adopted is one where a project manager is engaged for managerial purposes, but a traditional client/architect relationship still exists. In this instance, the Brief formulation will be principally determined by the proprietor in conjunction with the architect. The project manager may or may not have an involvement in the process. If involvement does occur, it is likely to be limited to advice concerning programming, management procedures, logistics and efficiency of performance and production.

In order for the novation system to work effectively it is important to formulate a Brief which is not only quantitative, but also qualitative. Without this detailed definition, the outcome will be nothing better than the outcome of a simple design/construct system. If a particular finish is required in a building foyer, for example, it needs to be defined. It may be achieved by either broadly defining the material (e.g. granite tiles) or by performance criteria (e.g. aesthetic qualities, durability etcetera). In turn, the extent of such tiling may be determined in conjunction with the future design drawings. The novation contracts to date have employed both methods i.e. specification of product and/or performance criteria. The latter may arguably be harder to achieve and judge, but is gaining greater acceptance. There is little doubt that methodologies will be developed and improved with increased use, and it should be borne in mind that the imposition of performance criteria is not restricted to use in novation contracts - it can be applied equally to other systems of project delivery.

8.4.2 Conceptual Design

The conceptual design is carried out by the design professionals, in particular the architect. Once again, the architect may be part of a project management team, but most commonly is engaged directly by the proprietor. In this situation, the architect prepares sketch plans and other documentation suitable for interpretation by the proprietor. As with a traditional system of delivery, a number of such proposals may need to be developed before one is accepted. It is important that the conceptual design be prepared in accordance with the Brief.
The Brief may then be used to evaluate solutions at various stages of development.

The client/architect relationship may exist in exclusivity of or in conjunction with a project manager. The circumstances surrounding the latter situation may vary in themselves. That is, a project manager may be involved from the outset, or alternatively, may be appointed at a point in time succeeding the architect's engagement. If the succession situation applies, it is possible that the project manager's involvement could begin during or after the conceptual design stage.

8.4.3 Design Development

The design development stage is most commonly a modified version of the traditional system of project delivery. Once again, the final course of action is dependent upon the involvement or otherwise of a project manager. Essentially, the difference lies with assigned responsibility for co-ordination of other consultants, the calling of tenders, and organisation of contract drafting to mention a few aspects.

The design development stage involves, as its name implies, the development of the conceptual design. Any design development undertaken must also be carried out in response to the original design Brief as defined. In a traditional system of delivery, design development is effectively completed prior to the commencement of documentation (working drawings, specification). Under a novation system, design development is only partially completed before such information is released for tendering purposes.

The extent of design completion has the potential to vary in relation to the scale, nature and complexity of the project. It may be possible, for example, to only achieve the equivalent of forty percent design completion for a simple building such as a warehouse. This may relate to all elements of the project: e.g. structure, claddings, services systems, fitout and so on. Alternatively, the degree of completion may vary between elements on a slightly more
complex building such as a simple office tower: e.g. structure fifty percent, claddings and fitout sixty percent, services twenty percent complete. A greater degree of completion and/or variation may occur on a slightly more sophisticated building such as an office tower with particular services requirements: e.g. structure fifty percent, claddings and fitout fifty percent, electrical and communications services ninety percent. It is important to note that there is currently no "standard" prescription for the degree of design completion that should be achieved. Rather, requirements are determined by and based on the nature and complexity of each specific project. This, however, has the potential to lead to other difficulties associated with definition of responsibilities and liabilities. When the required level of design documentation has been achieved, tenders are called.

8.4.4 Tendering

Tendering procedures have the potential to be complicated in their methods of execution. In the first instance, tenderers may be publicly invited to register their interest to tender or be selectively invited to tender. Methods effected are essentially the same as for other systems of project delivery involving common tendering procedures. There do exist, however, two distinct courses of action which may be taken. One method involves the same team of design professionals throughout the tendering process, while the other permits limited digression.

With respect to the first situation, the same design team is maintained throughout the tendering period. During this period, tenderers are usually at liberty to discuss aspects of the project with the relevant designer. Alternatively, conditions may be imposed whereby tenderers may only seek information from the principal consultant (or design team leader), usually the architect. In either case, each tenderer may not only discuss issues regarding clarification of design and further information, but also alternatives for such things as proposed structural system, materials selection and supply of equipment. It is important, however, that the building's overall design concept is not compromised if changes are made.
The second situation allows the tenderers to seek alternative solutions from consultants other than those involved initially. In investigating such alternatives, it may be possible, for instance, to alter a building's structural concept from that of a reinforced concrete frame to a steel frame in order to reduce construction time and/or costs. This particular situation did occur on one of the case studies examined in this thesis. However, if this course of action is taken, any suggested changes must obtain the approval of the original design consultants. If approval is given, the original consultants then proceed with the relevant design development and documentation. Provisions allowing for the involvement of additional consultants during tender limits that involvement to the tender period only. That is, the alternative consultants are only engaged (by the tenderer) for services to be provided during this period of investigation of alternatives. They would not, as a rule, replace the original consultants.

Consultants who engage in discussions with any one tenderer need to maintain a high degree of confidentiality such that other tenderers are not given information which may be advantageous for the purposes of their own submission. Likewise, consultants should ensure that if general information is given or matters clarified which may be applicable to all tenderers, then all tenderers should be provided with the same data at the same time. Since liaison and the establishment of good interpersonal relationships between the principal members of the project delivery team is an integral part of the tender process and subsequently of the execution of the works, the selection of participants is critical. For this reason, the architect will usually have an involvement in the tendering process. Involvement may include nomination of tenderers for the initial invitation process and subsequent assessment of tender offers. Alternatively, the architect may only be asked to assess or evaluate tenders. In order to avoid the possibility of a conflict of interest arising, the architect should not actually select the successful tenderer.

By including the architect in the tendering process two advantages may be gained. The first is an independent assessment of the tenderers' capabilities, expertise, reputation and general...
track record. The second is an evaluation of the quality of the potential relationship between the consultants and the successful tenderer. That is, if the architect (and other consultants) are willing and able to work co-operatively with the successful tenderer, then there exists less likelihood of disruption to the progress of the works or disputes arising as a result of clashes in interpersonal relationships. The success or otherwise of the project is dependent upon the nature and quality of these relationships. It should be realised that this condition applies to any contractual arrangement, not just novation. However, in recent years, the need for such harmony has been recognised, and the novation system of project delivery attempts to implement procedures whereby this condition may be exploited.

Tender periods for novation projects have a tendency to be longer than those for more traditional methods of tendering. The reason for this being to accommodate the seeking of alternative solutions and liaison between tenderers and consultants. Tenderers prepare their offers on the basis of the information as available at the time. The tenders are prepared without design and documentation having been completed. This, in itself, has the potential to create difficulties in pricing procedures. Obviously, the difficulty increases as the level of design undertaken is minimised.

Practice has shown that where unknown issues exist, the tenderers will generally try to obtain potential or, preferably, definitive answers from the consultants concerned. If answers are not provided at this point in time, tenderers have no alternative but to make assumptions and price in a "risk factor". Inclusion of this so-called risk factor is essential in respect of the tenderers since they are required to prepare their prices on the understanding that, should they be successful, they will have to fulfill their obligations under the contract for the offer as accepted. They are not in a position to be able to claim for variations, as is the case in some other forms of standard contract and, therefore, errors in estimation costs cannot be recouped easily, if at all.

The necessity for pricing for risk will have an adverse effect upon the proprietor. This
effect is in the form of an increased capital cost for the project, and the greater the risk being allocated to the builder the greater the associated cost. Aspects such as significantly incomplete design and/or ambiguities will result in an increased cost buffer. Proprietors need to be fully aware of the consequences of allocating risk in this manner, and weigh same against the potential for increased costs due to variation, extension of time and similar claims provided for in other forms of contract.

Tenderers who ultimately submit an offer do so on the understanding that they accept the responsibilities and associated risks inherent in the novation system of project delivery. It is essential that tenderers, and indeed their selected sub-contractors, make themselves fully aware of their responsibilities, obligations and risks under the terms and conditions of the contract. Failure to do so has the potential to create serious financial and legal liability for the parties concerned.

8.4.5 Acceptance Of Offer

The acceptance of a tenderer's offer by the proprietor will lead, as is the case in any construction project, to the signing of a contract. Several of the more recent novation contracts have been based on standard construction contracts, but contain amendments thereto. The forms of contract most commonly used for these purposes are AS 2124 and NPWC 3. Other novation projects have developed a contract which has been specifically drafted for that particular project (refer Case Study 3, this chapter).

In each case, the contracts contain detailed "Conditions of Contract". It is these conditions which most prominently highlight the differences between novation and other forms of project delivery. Examples of the types of inclusions is considered later in this chapter under the relevant case studies.

Like any other contract, acceptance of the offer by the proprietor incorporates
responsibilities on their behalf. The primary obligation is that the proprietor will pay the successful tenderer the amount of the contract sum provided that same has fulfilled their obligations under the contract. The most notable aspect relating to the builder's position upon the signing of the contract and, therefore, the effecting of novation, is that all risk associated with design, documentation and construction is transferred from the proprietor to same. It is also interesting to note that such risk transfer is retrospective. That is, the builder accepts responsibility for any and all design work or other such documentation which may have been prepared prior to the agreement being signed. Under a novation contract, like other contracts, the proprietor is not committed to acceptance of any of the tenders submitted.

8.4.6 Novation Of Consultants

Once a successful tenderer has been selected, changes to the consultants’ appointment conditions will result. Until this point in time, the consultants are (usually) engaged by the proprietor direct and, therefore, must exercise a duty of care towards same. After offer acceptance, the consultants are “novated” to the builder. The consultants are now effectively engaged by, and their responsibilities and obligations are transferred to the builder. They will usually no longer maintain contact with the proprietor, unless the contract specifically provides for this action. Figure 8.1 illustrates the relationships between participants during the pre- and post-novation stages (refer overleaf).

The builder is required to enter into a new contractual agreement with each of the original consultants. The conditions of engagement together with associated fee structures are determined prior to tender. Submission of an offer by a tenderer is done inclusive of acceptance of these terms. In this way, the continued appointment of the original consultants is guaranteed. This is not only beneficial for the consultants, but also for the proprietor since same is provided with some degree of assurance that the integrity of the design will be observed and maintained. Likewise, the fees due and payable to the consultants have already
Figure 8.1: Novation Project Delivery System

Pre Novation

- Proprietor
  - Principal Consultant (Architect)
  - Project Programmer
  - Sub-Consultants
  - Project Manager

Post Novation

- Proprietor
  - Project Programmer
  - Project Manager
    - Superintendent (administers contract)
  - Builder
    - Suppliers
    - Principal Consultant (Architect)
    - Sub-Contractors
    - Sub-Consultants
been negotiated and agreed. Therefore, they will not be placed in a position of having to renegotiate their fees, or having to endure the threat of a possible cut in those fees. It is important that under the new agreement, the consultants' scope of work, roles, responsibilities and obligations are clearly defined. This will ensure that the potential for disputes by either party will be minimised or negated. Likewise, if any claim arises with respect to such things as negligence or other liability, evidence may exist as to whether that claim can be supported, defended or countered.

8.4.7 Completion Of Design And Documentation

After the contract has been signed and the consultants novated to the builder, the process of completing design development and documentation can begin. By maintaining continuity of consultant involvement in the project, the design and documentation can be completed in accordance with the original concept. It is also important that this stage of design development and documentation adheres to the requirements and conditions as established in the original Brief. Without this adherence, the novation system has the potential to fail since it is primarily based on the transfer of risk in relation to defined parameters. Significant divergence from the Brief can lead to disputes and claims, particularly in respect of the obligations under the contract. That is, the builder has certain obligations to fulfil, not least of which is to execute the work in accordance with the agreement. If the agreement or contract specifies or defines certain requirements and these are subsequently not met, the builder has effectively failed to meet his obligations. In turn, the proprietor may be in a position to reduce or halt payment because of the breach. This could result in the matter being referred to arbitration or instigation of litigation proceedings. There is a need, therefore, for the agreement to allow a degree of flexibility associated with the variation of the design. Such variation may also assist the builder in modifying the delivery process as required.

The consultants prepare their documentation in much the same manner as for any other form
of project delivery. The principal difference being that roles and management hierarchy have changed. Pre-novation, the consultants would have been part of an independent design team, the leader of which was the architect. Decisions and courses of action would be as a result of liaison between themselves and the proprietor. They would also have been able to directly represent the proprietor’s interests. Post-novation, the consultants take their instructions and directions from the builder. Their status is effectively equal to subcontractors in the building process.

Although the consultants are relegated to subordinate positions in the overall delivery team, they still retain the same degree of professional liability for work performed, and are not excused from operating under the same ethical and professional conduct regulations that may apply in a traditional consultant/proprietor relationship. The only difference with the post-novation situation being that the duty of care, responsibilities and obligations which must be exercised are now applicable to the “new” client, namely the builder.

If alternative design solutions proposed during tender were accepted as part of the successful offer, they would be incorporated into the project. The builder is in control of the consultant team and as such may direct them as necessary. The builder is also responsible for managing the cost and programming this and other stages of the project. Consequently, if it is necessary to make alterations to the project in order to meet these requirements the builder is able to instigate such action provided that any changes made still comply with the original design Brief and the terms and conditions of the agreement. The proprietor may wish to provide a representative to oversee and observe the project after novation has occurred. This may apply to the design development and documentation stages as well as the construction stage. If such a representative exists, the builder should be duly informed, and the building contract provide for same.
8.4.8 Construction

The construction stage of the project operates in much the same manner as a design/construct system of project delivery. The builder is responsible for the engagement and performance of a series of trade sub-contractors and suppliers. The builder enters into a separate sub-contract with each of these participants. Failure to perform work to the required standard and/or complete it on time will be to the builder’s detriment and, ultimately, their own. The builder has no provision for recourse to the proprietor since this constitutes part of the risk that the builder has undertaken to accept.

The builder has entered into the agreement on the basis of forfeiting any right to claim costs for either additional or remedial work executed or delays incurred. Consequently, if these situations do occur, the builder must bear these costs. Failure by sub-contractors, suppliers and consultants to meet obligations under their own sub-contract agreements would undoubtedly lead to the builder seeking recourse from them. Although the builder undertakes to accept the risk as defined under the head contract, endeavours are made to share or transfer that same risk to participants lower down on the hierarchical ladder.

It is common for novation contracts to have contained within them requirements regarding quality control and quality assurance. Although provisions generally are limited to quality, with respect to the construction phase of the project, recent developments have shown that its implementation and use is being extended to cover other stages of the delivery process. In order for a quality control and assurance programme to operate effectively, it should indeed cover all stages of the project. The extent, nature and responsibilities associated with a quality assurance programme should be clearly defined in the contract, and cover all the parties involved in the delivery process. The intricacies of these requirements are discussed in more detail in Chapter 9.

During construction, the consultants may be required to undertake periodic inspections of
the work. If these are carried out, any reports prepared are submitted to the builder. Provisions are not usually made whereby the proprietor would gain access to copies of such documentation. It may be claimed that issues contained therein are of no concern to the proprietor. This may be perfectly valid if considering such matters as general remedial work or execution of work in accordance with documentation. Potential problems arise when inspections reveal that the quality of the work or design intention has been compromised and the builder is in disagreement with the assessment and/or unwilling to rectify same. It may be argued that if a builder with a good professional attitude and approach is engaged, such matters will not arise since the builder in question would not be willing to risk his own reputation. However, if the integrity of the builder is at all questionable, the risk of deception or disguising flaws could become very real (M. Betts, personal communication, 23 April, 1992). The potential for such activity increases if the builder suffers any financial loss with respect to the execution of the works. The position of consultants in this situation can become somewhat tenuous. They must ensure that any instances of non-compliance with observations and recommendations made are duly recorded in detail, providing information relating the builder's decision to act contrary to the advice offered.

Although consultants are requested from time to time, to perform inspections and submit reports, they are geneerally not authorised to approve progress payments or issue certificates. To do so under novation conditions could mean that they are compromising their professional liability. This is because during the construction stage they are engaged by the builder, not the original proprietor, and thus a conflict of interest may arise between the consultant, the builder and the proprietor. Under some novation contracts, the builder is required to obtain his own professional indemnity insurance. This is based on the fact that he is technically providing design services to the proprietor, irrespective of whether such services may be of a sub-contract nature.

It is important that the builder is capable of executing the work in accordance with the terms and conditions of the contract. Such capability extends to cover the aspect of industrial
relations. That is, if a builder has a good industrial relations record, it will generally mean that the project is less likely to be affected by industrial disputes. If disputes do arise they have a greater potential for quick resolution and with minimal negative consequences.

Under a novation system the builder must complete the works within a specified time period and that in most circumstances, extensions of time are not granted. In addition to this particular obligation, some novation contracts try to offer an incentive. This normally takes the form of a bonus payment for completion before the scheduled date for practical completion. Early completion under this condition would mean that the builder not only had the potential to achieve savings by reducing construction time, but received the said bonus payment as well.

8.4.9 Post-Construction And Commissioning

The post-construction stage incorporates provisions for the completion of minor elements of incomplete work, rectification of defects and commissioning of plant, equipment and services. Responsibility for undertaking this work rests with the builder. As occurs with other standard forms of contract, a defects liability period exists, and a final certificate cannot be issued to the builder until he has met all his obligations under the contract.

The majority of novation contracts have one date for practical completion. However, circumstances may exist whereby a staged completion is required. In this situation, the building would be divided into distinct stages or zones. For example, in the case of a thirty storey high rise office tower, there may be three dates for completion, each one corresponding with the tenth, twentieth and thirtieth storeys respectively. In cases such as this, provisions need to exist whereby obligations are met on a stage by stage basis, catering for such things as partial (and proportional) release of security or retention moneys. Certificates would be issued in relation to the provisions of the completion stages.
8.5 CONTRACTUAL DOCUMENTS

It is recommended in the R.A.I.A. Report R31 (August 1992) that from 'the outset of the project the proprietor should clearly state [the intention] to novate and set out the objectives of the project'.

The Report states that there are effectively three contractual documents associated with the execution of a novation project. These are the:

(a) Consultant agreement;
(b) Deed of novation; and
(c) Building contract.

8.5.1 Consultant Agreement

When the consultants have been selected and consultant/proprietor agreements drawn up, definition of the intention to operate under a novation system of delivery should be established. The consultant agreement should include a variety of information (R.A.I.A. Report R31, August 1992), the main items of which have been listed below.

(a) ROLE OF THE CONSULTANT

The role of the consultant needs to be defined for each stage as well as the entire project. For instance, if the architect is to be nominated as the design team leader in the pre-novation stage, the associated authority and responsibilities that it entails should be defined. Such definitive information should also be included for the post-novation stage.
(b) **SCOPE OF SERVICE**

Like the role definition aspect, the scope of service in relation to the total project and on a stage by stage basis needs to be defined. This will clarify precisely what is expected of the consultant and at what time or stage it will be required. This portion of the consultant agreement would be of a format and nature similar to a traditional architect/client agreement. It would include such things as the preparation of design drawings, documentation, tender evaluation and selection, liaison with specific parties and so on.

(c) **FEES**

The nomination of fees, and basis and conditions of payment thereof must be established in the consultant agreement. It is important that the total fees are specified together with an associated breakdown which might apply to various stages of the project. Responsibility for payment must be defined, inclusive of applicable time frames for said payment, and provisions for the recovery of any outstanding moneys owed.

(d) **AGREEMENT TO NOVATION PROCEDURES**

Agreement to novation procedures by the consultant must be obtained for the purposes of this agreement. It is obvious that if the consultant is reluctant or unwilling to enter into the agreement on the condition that novation will occur, the agreement should not and cannot be effected. Such agreement would normally be subject to the consultant's acceptance of the tender list. The ability of the consultants and the successful tenderer to function on a cooperative basis is of vital importance to the successful completion of the project.

(e) **SUBSTITUTION PROVISIONS**

Agreement must be obtained that the original proprietor will be replaced (or substituted) by
the builder in the agreement at the time of novation. Consequently, payment provisions and liabilities will be transferred from the proprietor to the builder. It is important that these provisions and obligations are clearly defined since failure to do so has the potential to lead to negligent action and a dispute may arise between the parties concerned.

The issue of liability transfer is of particular importance to the builder during the post-novation stage. It is in the builder's own interests that a claim cannot be made against him in accordance with the provisions of the contract.

(f) INSTIGATION OF NOVATION

Specification of the time or stage novation is to occur should be definitive. This is of particular importance to the consultants involved, although it is also of concern to the other parties, namely the proprietor and the builder. In respect of the consultants, it establishes the point in time when their roles change and responsibilities and obligations are transferred. It has an inherent impact upon the nature and type of professional indemnity insurance (and other insurances) that will be required to be effected by the consultant. With respect to the proprietor and the builder, their responsibilities and obligations also change.

(g) AMENDMENT OF CONSULTANT AGREEMENT

Provision that the consultant agreement cannot be amended without the prior written consent of the original proprietor is important. It is required so as to offer some degree of "protection" for the consultant and their appointment. That is, the builder is not at liberty to amend the agreement post-novation without the proprietor's approval. Benefits also extend to the proprietor: by providing that amendments require express consent from the proprietor, same is assured that the design team as selected and originally engaged is maintained.
(h) PERFORMANCE SECURITY

Some forms of novation contract have a requirement that security against performance be provided. The reasoning behind this is that should the consultant, for instance, fail to perform the duties as defined, the proprietor has the opportunity to be compensated for costs that failure may incur. Likewise, if the proprietor becomes insolvent, the consultant may be in a position to recoup any fees that may be owing at the time.

(i) CONFLICT BETWEEN AGREEMENTS

It is important that conflicts should not arise between the consultant agreement and the building contract. If a conflict evolves it could have a deleterious effect on either or both agreements as well as the project overall. Questions may arise as the intent of the documents which, in itself, may threaten the validity or enforceability of same. There would be little doubt that the situation would lead to legal debate and interpretation being required. This could be an expensive exercise, both in terms of time and money.

Therefore, consideration should be given simultaneously to the nature and content of both the consultant agreement and the building contract. The most effective way to achieve this is to consider the documents to be unified yet distinct for their individual purposes. That is, although they may technically be separate documents, each should be drafted in conjunction with the other. The best way to achieve this is for the same person or team to be assigned drafting responsibility for both agreements.

(j) FINANCIAL FAILURE

Matters of insolvency or other financial failure should be addressed. This is of importance to both parties. If the consultant fails financially, the proprietor should have the option of terminating the existing agreement and engaging another consultant (this may also apply to
the builder post-novation stage). The proprietor may be able to call upon the 'security against performance' provided. Likewise, if the proprietor becomes insolvent, the consultant may require some mechanism whereby fees due can be recouped.

(k) COPYRIGHT

Copyright should be defined. It is important that the consultant's 'intellectual property' is protected. Most standard contracts provide for the copyright to remain with the consultant, but the proprietor is licensed to use the documentation (and design) for the purposes for which they were intended. i.e. the building in question can be built on the site for which it was designed. This prevents an unscrupulous proprietor from using a particular design on another or more than one site or alternatively "selling it on". R.A.I.A. Practice Note PN 12A (May 1976) highlights this:

Unless there is some express arrangement to the contrary...the copyright on an architect's design rests with the architect.

However, by accepting an instruction from a client and preparing a design for him, the architect gives that client a licence, although not an unrestricted licence, to use that design.

Some forms of novation contract specifically assign copyright to the proprietor (refer also Chapter 4, Item 4.10).

(1) DISPUTE RESOLUTION

Dispute clauses should exist in any form of agreement. This consultant agreement is no exception. It is sometimes argued that by having dispute clauses in a contract, they have a tendency to invite claims. However, the primary reason for having such clauses is to provide a mechanism whereby if a dispute does arise, certain defined procedures can be undertaken to resolve the matter. The majority of building contracts prescribe a staged course of action, namely negotiation followed by arbitration if that fails. Although the consultant agreement is
not a building contract, it is wise to make provision for a similar method of resolution. If arbitration fails and/or if litigation is instigated, the resultant legal costs could far exceed the amount which may be attributed to the dispute.

(m) PROFESSIONAL INDEMNITY

Professional indemnity and other insurances to be effected should be addressed. It is vital that the insuring body is aware a novation contract is being entered into by the consultant. This is due to the nature of the novation system of project delivery, during which the consultant's role, responsibilities, obligations and liabilities change. Since professional indemnity insurance policies usually operate on a "disclose everything" principle, failure to disclose involvement in a novation contract could result in the policy being revoked or declared null and void.

(n) CONSULTANT'S RISK

The consultant's risk in respect of construction-rectification cost should be defined. That is, clarification as to whether or not the consultant will be held liable for rectifying construction work as a result of inadequate or inappropriate design and/or documentation. There is little doubt that the consultant could not escape liability under the usual circumstances associated with the provision of professional services. This clause, however, could more clearly define the circumstances under which a proprietor (or builder post-novation) may or may not seek recourse against the consultant. That fact remains to be seen (and tested) as whether such a clause would override common professional responsibility.

Clarification should also be sought as to what liability exists if, during the post-novation stage, the builder elects to undertake work or other course of action without the express or implied approval of the consultant. This is particularly relevant when considering such things as material or component substitution.
The deed of novation is a document which interlinks the three principal parties, namely the proprietor, the builder and the consultant. By becoming a signatory to the agreement, each party inherits a responsibility to perform. Such responsibilities may include the provision of warranties which, by their nature, can have an adverse effect upon the attainment and maintenance of professional indemnity and other insurances. This is of particular concern to the consultants involved. The deed document should establish four primary factors.

(a) **BUILDER'S ACCEPTANCE OF RISK**

The time or stage at which the builder assumes the risk of design and construction should be defined. Essentially, once novation has occurred, the builder assumes responsibility for all design work and other documentation that may have been prepared prior to this occasion. This is of considerable importance for each of the three parties to the deed of novation. The builder's risk increases markedly, while at the same point in time the proprietor's risk diminishes. The consultants risk is lessened in theory, but perhaps not in practice. There merely exists a shift in the line of responsibility from the proprietor to the builder.

The risk which the builder accepts relates to a number of items. The builder undertakes to complete the work as defined in the agreement and in accordance with the design Brief. Such work must be executed within the specified time limit at a cost not exceeding the agreed contract sum. The completion of work includes design, documentation, construction and commissioning. As a result of this broad spectrum of responsibilities the builder is required to effect several different kinds of insurance. In some cases, professional indemnity insurance cover is required due the provision of design and other professional services. It is also important for the builder to monitor and exercise strict control over any sub-contract agreements with which same may be involved. This includes construction and consultant sub-contracts.
(b) DECLARATION OF RISK ACCEPTANCE

As a consequence of the acceptance of risk, the builder must declare acceptance of it. This course of action simply verifies the agreement and the parties intent to be bound by it.

(c) CONSULTANT'S PERFORMANCE

Confirmation must be obtained of the consultant's willingness to perform under the new contract post-novation. Such confirmation carries with it an inherent obligation to perform. Failure to do so could lead to a situation in which the consultant refuses to work with or for the builder whose responsibility and obligation it is to execute the work. That is, failure of the consultants to perform could create a situation in which the builder is unable to meet his obligations under the contract. This would be increased if the builder was unable to terminate the consultant's services and appoint a substitute. It may be argued that the inclusion of a performance obligation condition creates a mechanism whereby non-compliance constitutes a breach of contract.

It is important, however, that if a performance obligation is incorporated, it should also include definition of the services and duties required i.e. definition of what actually constitutes "performance". In order to accomplish this successfully, it may be necessary to redefine the consultant's obligations regarding the works.

8.5.3 Building Contract

There are a number of points which a novation contract should address. Some of these are listed below.
(a) **BUILDER'S PERFORMANCE**

The contract should effectively procure the builder's performance. This includes design, documentation, construction and commissioning services. Such services must be provided in accordance with the terms and conditions of the contract, including compliance with the original design Brief.

(b) **PROPRIETOR APPROACHING CONSULTANT DIRECT**

A condition usually exists whereby the proprietor must agree not to contact the consultants direct without first obtaining the builder's approval in writing. Such a condition is considered important for the builder since responsibility has been accepted for all facets of the project, including the consultants' work. To allow direct liaison between the consultants and the proprietor may jeopardise the builder's managerial powers and increase the risk associated with the ability to control the various aspects of the project, not least of which is cost and time programmes. In turn, this may result in changes to the project of which the builder is unaware or ill-prepared to deal, yet nonetheless for which responsibility is taken.

Under these circumstances, the consultants may also be in breach of their consultants agreement. That is, if they are to become responsible to the builder at the time of novation and they continue to liaise with the proprietor, they may be in breach of those responsibilities as defined.

(c) **EXECUTION OF DEED OF NOVATION**

The builder is required to execute the deed of novation and in so doing, accepts and undertakes the defined risks applicable to the project (refer Deed of Novation, Item 8.5.2, this chapter).
(d) **PROCUREMENT OF CONSULTANT SERVICES**

The builder must agree to procure the consultants' services. The scope and nature of such services are to be in accordance with the proprietor/consultant agreement(s) as previously determined. In so doing, the consultant is guaranteed of being paid for services rendered, irrespective of the fact that the paymaster role and obligations have been transferred. Likewise, the continued engagement and conditions thereof relevant to the original consultant can be guaranteed and protected.

While agreeing to procure the above services, the builder must also agree not to alter the said consultants agreement without first obtaining the written consent to do so by both the proprietor and the consultants. This simply affords protection to the terms and conditions under which the consultants were originally appointed.

(e) **DESIGN VARIATION**

Although the concept of variations is not normally entertained in novation contracts, some contracts still provide for this possibility. If they do, they should include a definitive list of the reasons for and circumstances under which a variation may be allowed. The most common of these situations is when the proprietor specifically requests a variation order be issued. If variations are permitted the novation system has a tendency not to operate as efficiently or effectively as would otherwise be the case. This relates primarily to the fact that the builder is required to guarantee costs and time programmes. Conforming with a variation order can hinder or negate compliance with both of these requirements.

It may be argued that some degree of variation must be provided for in regard to the design process. This is due to the non-static nature of designing. That is, inherent in the design process is a need for flexibility to accommodate continual development and refinement. This has a particular influence when considered in context of a novation system of project
delivery. Since a project's design is not fully complete when tenders are called and subsequently let, provision must be made for the design process to continue. It is important, therefore, that parameters are established in which that development can occur.

(f) **DESIGN MATTERS**

The builder is required to keep the proprietor informed of design matters. This can include general progress as well as any changes that may be necessary or desired. Despite this notification and any possible acceptance by the proprietor, the builder still maintains responsibility for the design and its outcome.

At the time of novation, the proprietor is required to warrant that the design in fact complies with any relevant codes and regulations currently applicable and, in so doing, warrants the competence of the consultant in complying with said codes and the ability to produce any necessary documentation. Post-novation, the proprietor must accept that a design variation may need to be instigated in order to meet any changes to those codes and regulations.

(g) **AUTHORITY FEES**

Responsibility for the payment of any relevant authority fees needs to be defined explicitly. Failure to do so may lead to a financial dispute between the parties. Likewise, the project's time programme may be disrupted or delayed as a result of non-payment of such fees. This, in turn, has the potential to lead to other disputes.

(h) **REDOCUMENTATION**

It is not uncommon for this form of contract to require redocumentation post-novation. This is primarily due to the nature of the novation process wherein design is incomplete at the time of novation. Since risk factors have already been priced into the project, the builder
will ensure that any changes made do not have a detrimental effect upon either costs or time programme. However, it is highly probable that the changes made will be more extensive, in documentation terms, than those that might be needed in a traditional system of project delivery. As a result, it is important that the consultants establish any fees applicable to such redocumentation prior to the event. Experience shows little is achieved if negotiations are left to the last moment or, even worse, after the work has been done.

(i) PROFESSIONAL INDEMNITY

Some novation contracts require the builder to obtain professional indemnity insurance. This is due to the fact that the builder has accepted the responsibility of providing professional design and documentation services for the project.

It is in the builder’s interest to ensure that any consultants engaged at novation have their own individual professional indemnity insurance policies. Policies should be current and reflect not only the value and nature of the project, but also the fact that they have entered into a novation form of contract.

(j) REPRESENTATIVES

The identity and role of any contractual representatives should be defined. This applies to both the proprietor and the builder. Most building contracts make provision for the acknowledgment of a given party’s representative, and novation contracts are no exception.

(k) QUALITY ASSURANCE

Most novation contracts provide for the incorporation of a quality assurance programme. It is generally the proprietor who requests its inclusion. Such programmes have gained increased recognition and acceptance over the past few years, due primarily to the many
changes occurring within the Australian building industry.

Issues relating to when such a programme should be implemented still create dissension.
Whatever the timing, it is important that matters such as this are specified. Likewise, the nature and structure of the system must be defined, inclusive of associated roles, responsibilities and obligations.

8.6 THE NATURE OF NOVATION PROJECTS

Discussion has already covered the principles applicable to the novation system of project delivery, including the process itself and the contractual documents associated therewith. As can be seen from the Case Studies included in this chapter, the more significant novation contracts have several aspects in common. These aspects include contract sum, project type, participants and funding source. Although variations within each element do exist, comparisons can still be drawn.

8.6.1 Contract Sum

The value of the contract sum is generally in the multi-million dollar range. Of the Case Studies considered, the lowest contract value was in the order of $40 million. Several other contracts ranged between $120 million to $200 million. Two conclusions may be drawn from this observation.

Firstly, when dealing with a project of this construction value, proprietors are more receptive to the idea of alternative methods of project delivery. It is at this point in time that the novation system may be proposed, considered and ultimately selected.

Secondly, the novation system is particularly suitable to projects of this scale. The primary
reason for this is that delivery, on time and at a predetermined cost, is guaranteed. This has significant impact upon the proprietor's perceptions (the first price given is the one remembered) and ability to secure funding without the potential, or probability, to have to find additional funds, as may be the case in other methods of delivery. Another significant advantage for the proprietor is that a single line of responsibility exists. This means that, post-novation, the proprietor need only deal with one party, namely the builder (or a project manager if one is involved) rather than a number of participants. Likewise, if something goes wrong during the progress of the work, the builder is obliged to take responsibility for the issue and undertakes to rectify the situation. The method by which that rectification is achieved is of no concern to the proprietor. As a result, the proprietor is shielded from any other disputes that may develop between the builder and other participants. The novation system also provides for the proprietor to have a greater influence upon the design of the project. This opportunity, unlike more conventional fast track systems, caters for proprietor involvement in determining a detailed design Brief and thus ensuring that the proprietor's needs will be met.

8.6.2 Project Type

The novation system of project delivery is particularly suited to buildings which do not entail complex architectural design and/or structural concepts, but do employ repetitive or modular elements and components. Projects may, however, be of a number of typologies (e.g. entertainment centre, stadium, office tower). This is primarily due to the fact that under such a system, design and documentation is incomplete at the tender stage. It is difficult, therefore, for tenderers to accurately assess requirements under these conditions. Likewise, unresolved design issues relating to complicated elements (e.g. structure, services) have the potential to create problems post-novation.

Doubt does exist within the Australian building industry as to whether novation would be suitable for a complex or non-repetitive type of building (P. Dempsey, personal

8.6.3 Participants

The participants involved in a novation project are essentially the same as those involved in other systems of delivery. Any difference which does exist lies with their individual roles, responsibilities and obligations, all of which change during the course of the project.

(a) PROPRIETOR

Pre-novation, the proprietor is generally part of a traditional method of project delivery. This involves the engagement of consultants to prepare design drawings and assist in the development of a design Brief. The proprietor is responsible for payment of consultants fees in accordance with an agreement as pre-arranged.

Post-novation, the proprietor relinquishes control over the consultants. Such control is transferred to the builder. The proprietor may only deal with the builder since direct contact with the consultants is generally not permitted. Any risk that the proprietor may have carried prior to novation is transferred to the builder, including any retrospective risk associated with design matters. The proprietor is responsible for payment of the builder whose fees and charges include the consultants’ fees.

To date in Australia the proprietor, most commonly, has been either a State Government, Federal Government or statutory body/authority. Private proprietors have been less common. There may be two reasons for this. The first is that governmental institutions are more willing to investigate and experiment with alternative forms of project delivery. This could relate to the fact that their source of funding is not self-generated (i.e. its source is taxes) and accountability minimal. The second reason may be that due to the scale of the
projects concerned, together with the economic climate of recent years, governmental institutions are the only bodies who have the level of capital required for such project developments. At the same time, private developers are shying away from any involvement in the building industry and/or the Australian property market.

(b) **CONSULTANTS**

Pre-novation, the consultants are usually engaged direct by the proprietor to prepare design drawings and assist in the preparation of the design Brief. They owe a duty of care and other obligations and responsibilities to the proprietor. They may also become involved in tendering procedures. Most frequently, the architect heads the design team, and work procedures and relationships are of a traditional format.

Post-novation, the consultants' responsibilities and obligations are transferred to the builder. They will not normally have any contact with the original proprietor. During construction, inspections are carried out, but the reporting of issues relating to quality are directed to the builder, not the proprietor.

Often the consultants selected for a particular project are chosen on their size and reputed ability to perform the tasks required. A firm's "track record" needs to be investigated and assessed. This should include not only the type and scale of project designed, but also its completion and end-use results - successful or otherwise.

(c) **BUILDER**

In a novation contract, the builder does not normally become involved until the tendering period. Once novation occurs, the builder takes over all responsibility for the project's delivery, including design. Design liability is retrospective and, therefore, even though the builder may not have been involved in the pre-novation phase, responsibility for it is
nevertheless inherited.

Since the majority of projects using a novation system of delivery are of multi-million dollar construction value, the successful tenderer (i.e. the builder) must be capable of executing the works. Of fundamental concern is the builder's ability to manage the process, inclusive of design, documentation and construction. The builder must have a comprehensive knowledge of the current state of the building industry, in order to enable advantage to be taken of aspects such as availability of materials, components and equipment. Likewise, an acceptable track record with respect to industrial relations is important. Although it may be argued that these issues are important to the delivery of all projects under any system, they become more critical with novation. The reason being that in a novation project, time and cost are guaranteed. The builder, therefore, cannot afford to incur delays or cost increases, because these factors will have to be borne by same. The builder must be willing and capable of making changes throughout the project in order to re-establish costs or time programmes. This may mean making changes to selections, altering construction/erection techniques or incorporating design modifications. However, any changes made cannot compromise either the design Brief as detailed or the contract as defined (of which the Brief is a part).

(d) **LEGAL REPRESENTATION**

Most novation projects usually incorporate the services of the legal profession. Some of the contracts used are based on existing standard forms of contract that are amended, while others were not. In all cases, however, the contracts included the use of a consultant's agreement, a deed of novation and detailed conditions of contract. The contracts, whether amended standard forms or new, are prepared on a specific-project basis. That is, each contract used is prepared exclusively for use on a given project. The exception to this is the Australian Department of Defence “Document and Construct” form of contract (refer Chapter 7. Item 7.8.4).
It is considered important that all the legal documents for any particular project are prepared by the one person or team. This will assist in avoiding possible conflicts between the intent and contents of the documents. It may be argued that the consultants should have some involvement in the drafting or reviewing of the consultants’ agreement at least. This would ensure that their interests and concerns are met, and matters of particular concern to them addressed - matters which may not be immediately evident to the document’s drafter.

It is also important that the person or team responsible for the drafting of the legal documents has an extensive knowledge of the Australian building industry and the results of litigation proceedings associated with building projects. This experience in constructional legal matters should better equip the drafter to minimise the possibility for disputes.

Matters relating to risk transfer, acceptance and responsibility should be clearly defined. Each of the parties’ roles, responsibilities and obligations during all stages of the project should be definitive in nature. Ambiguities must be negated.

A warning should be given to the document drafters. This relates to the consequences of action. That is, if a standard contract is amended or a new one developed, the effect of those amendments or new clauses should be fully investigated before they are applied.

Interpretation by the courts is often such that a seemingly minor, unimportant change can have dire consequences if the interpretation differs with the intention. This is exacerbated if the intention is deemed as implied not express (refer Chapter 4, Items 4.5.1 and 4.5.2).

(e) INTER-RELATIONSHIPS

Consideration has been given to the individual roles, responsibilities and obligations of the various participants in a novation project. Alongside this exists a need for the participants to co-operate between themselves. Mutual co-operation is important in any project delivery system. Investigation into the reasons for litigation in building projects reveals that there are two broad circumstances which lead to legal action being taken.
The first is a situation whereby one or more parties to a contract fail to meet their obligations under the agreement. In this instance, the liabilities and subsequent proceedings are generally clear cut.

The second is where one party to the contract believes or perceives that an injustice has been done. This may relate to outcome not equating with expectation. It may also relate to the existence of a personality clash and a desire "to get even". For example, a difference of opinion fuelled by personality differences may exist between an architect and a builder on a traditional project. Under most forms of standard contract the architect is cast in the role of certifier. This brings with it considerable power in respect of the certification of payment, and the architect may be tempted to withhold certification by insisting that the execution of the works be carried out "to the letter". Alternatively, the builder may not be performing to the required standards or may be reluctant or unwilling to execute instructions as directed. Such an obstructionist approach may lead the architect to being even more critical of the work as executed and unwilling to compromise on any issue.

It is for reasons such as this that efforts have been made in novation contracts to minimise the potential for such risk. This may be addressed during the tendering stage if the consultants have an input in the tendering process, including an evaluation of tenderers. Since the terms and conditions of the consultants' engagement and associated fees have already been established prior to the acceptance of a successful tenderer, there would appear to be no financial advantage in the consultants providing a favourable response regarding any particular tenderer. Discouragement of favourable assessments for monetary gain should lead to judgements being based on the perception of their capability to perform and the likelihood of a good working relationship. Unethical practices still have the potential to be entertained. These take the form of independent (and confidential) agreements being reached between the consultants and tenderers during the tender stage. Secret fees, similar in nature to those under investigation by the Royal Commission into Productivity in the Building Industry in New South Wales, can be hidden within tender submissions. The likelihood of
such practices occurring is slim, however, history has shown that the possibility cannot be totally dismissed.

8.6.4 Case Studies

The case studies which follow are the Adelaide Entertainment Centre project in Adelaide, South Australia, the New Commonwealth Offices (also referred to as ‘Casseldon Place’), Telecom Corporate Headquarters Building and the MCG Great Southern Stand Redevelopment projects in Melbourne, Victoria. An attempt has been made to consider each case study taking into account the opinions and experiences of a variety of participants for each project. In addition, consideration is given to the standard 'Document and Construct' contract developed by the Australian Department of Defence (refer Case Study 5, this chapter).

The case studies were selected for a number of reasons including location (two capital cities, urban), and variations in project value, building typology, construction techniques, participants and degree of design/documentation completion prior to novation.
8.7 CASE STUDY 1: ADELAIDE ENTERTAINMENT CENTRE, ADELAIDE, S.A.

8.7.1 Project Details

**Project:** The Adelaide Entertainment Centre.

**Address:** Port Road, Hindmarsh.

**Proprietor:** Department of the Premier and Cabinet (in conjunction with The Grand Prix Board).

**End user:** Undetermined until midway through project.

**Architect:** Hassell Pty Ltd Architects.

**Planner:** Hassell Planning Consultants Pty Ltd.

**Engineers:**
- Dare Sutton Clarke Pty Ltd (Structural).
- Norman Disney & Young (Services).
- Acer Hosking Oborn Pty Ltd (Civil).
- Bassett-PGD Consulting Engineers (Acoustics).
- Murray F. Young & Associates Pty Ltd (Traffic).

**Landscape Architect:** Land Systems EBC Pty Ltd.

**Catering Consultant:** John Giles Associates Pty Ltd.

**Quantity Surveyor:** KB Widnells.

**Builder:** Jennings Construction Ltd.

**Building Consultant:** Savant Pty Ltd.

**Project Manager:** SACON (South Australian Department of Housing and Construction).

**Cost Manager:** SACON (South Australian Department of Housing and Construction).

**Construction Cost:** $45 million (approximately).

**Construction Time:** Commenced - 1985 (need identified).
- Late 1988 (detailed design).
- November 1989 (construction).
Figure 8.2: Case Study 1
Adelaide Entertainment Centre, Adelaide, S.A.
8.7.2 Project Description

(a) OBJECTIVES AND HISTORY

In 1985, the South Australian Government identified the need for an entertainment centre suitable to accommodate "world class" entertainers. It was intended to cater for performances by individual artists, bands and large stage productions and cover a range of musical, cultural and sporting events. The Government's objectives were aimed at providing a facility which would contribute to the economic and social development of the State of South Australia. It was hoped that the complex would increase travel to and within the State, and provide the basis for tourism infrastructure. There also existed a need to ensure that the development complied with relevant local planning objectives and policies, and in so doing did not detract from the existing urban environment. There was a requirement that the design was to be cost effective, functional, flexible, revenue producing and able to be completed in a time frame commensurate with upcoming political events.

The State Government of South Australia purchased the site over a period of time between 1985 and 1988. The total site area is 4.7 hectares. During that time registrations of interest were called for the preparation of design proposals. Hassell Pty Ltd Architects were eventually selected and they were subsequently engaged as the principal consultant. Other consultants were engaged on a secondary consultant basis. At the time of calling tenders, approximately sixty percent of the design and documentation was complete. Jennings Construction Ltd was appointed as the builder in September 1989.

Design Parameters

The complex seats eleven thousand nine hundred spectators and provides fixed raked seating, retractable tiered seating and arena seating on the flat. The building has been set below ground level by some four metres. This creates an auditorium which is readily accessible.
from the ground level foyer area. The building is broadly divided into three levels: upper, middle and lower (Building Owner & Manager, Nov. 1991).

The lower level houses the flat-floored arena, backstage facilities, storage, loading areas, workshops, toilets, change rooms, food services and plant rooms. The middle level accommodates thirty five corporate suites (for increased revenue) adjacent to the central arena, food services, administration areas, VIP lounges, and the adjacent below ground carpark. The upper level houses the main auditorium seating which has been extended over and above the corporate suites (thereby increasing spectator sight lines), foyers, retail outlets, liquor bars, fast food, confectionary and merchandise outlets, tavern, restaurant and associated kitchen facilities, toilets and plant rooms.

By sinking the building into the ground, the overall height was reduced. The main roof is of a vaulted design and varies from between ten and twenty metres above ground level. The main entrance foyer has a separate roof structure of some four-and-a-half metres in height. The building plan shape is essentially rectangular and measures approximately one hundred and forty two metres long by ninety metres wide and covers more than twelve thousand square metres in area.

The building's architectural and structural design was not of a particularly complicated nature, however, some constructional feats were achieved. The arena slab required a pour of three thousand and fifty square metres, and was the largest suspended concrete slab in South Australia's building history. The roof was made up of eight primary trusses, each of which had a span of eighty five metres and weighed twenty seven tonnes. The vaulted roof varies in height from ten to twenty metres and is supported by a row of free-standing columns. The perimeter walling is of high level glazing and concrete blockwork. The roof decking is colour-coated steel sheeting.

Due to the nature of the complex and the activities it is intended to accommodate, acoustic
considerations and provision of services was of vital importance. It has been claimed that these factors were of primary consideration to the design of the building (A. Evans, personal communication, 17 September, 1991). The acoustic design solution had to cater for end, side or “in the round” staging arrangements. A variety of services had to be provided including:

(a) Air-conditioning;
(b) Mechanical ventilation;
(c) Smoke venting;
(d) Gas heating;
(e) Electronic security;
(f) Vertical transportation
(g) Fire services;
(h) Lighting;
(i) Electrical services;
(j) Communications; and
(k) Audio visual facilities.

8.7.3 Management

This project was carried out on a project management basis by SACON (South Australian Department of Housing and Construction). The principal project manager, Mr. Ray Power (Building Owner & Manager, Sept. 1991):

...selected a novation contract as appropriate due to the short program and desire to reduce the risk to Government of budget blowout. He managed a tender registration and tender call process culminating in selected registrants tendering a fixed price lump sum offer which allowed for all variations due to design omissions or errors; for latent site conditions; for inclement weather and for industrial stoppages.

Prior to tender call, all design decisions were vetted by the cost manager, Mr. Roger Grigg. Comparisons were constantly made between the cost plans established and any modifications made by the design team during the design phase.
Once construction began, SACON's project management role altered. SACON established a liaison network between themselves and a representative of the proprietor, namely the Department of the Premier and Cabinet, the builder, Jennings Construction Ltd and a myriad of Government and Local Government authorities and departments.

8.7.4 Contractual Documents

Analysis of contractual documents covers the most important or relevant issues thereof. Discussion is limited to the documents which were obtainable and/or released for research purposes at the time of investigation into this Case Study.

(a) CONDITIONS OF TENDERING

Tenders were submitted on a fixed lump sum basis with no provision for rise and fall adjustments. There was a requirement that tenderers acquainted themselves with all matters pertaining to the proposed contract before making their offers.

The tendering conditions specified that the contract documents consisted of the Special Conditions of Contract, General Conditions of Contract NPWC 3 (1981) and Annexure, the Design Brief, Builder's Documents and any Existing Documents.

Tenderers were at liberty to submit alternative proposals. If they elected to do so, however, they were required to stipulate how such alternatives differed from the original proposal and identify any associated cost adjustments. In order for the alternative solutions to be accepted, a requirement existed whereby information pertaining to same was to be submitted as part of the tenderer's offer.

The tendering conditions provided details of the manner by which the principal (referred to in the document as 'primary') consultant was to be engaged. It also provided details of the
exact amount of fees due and payable to the principal consultant when novation had occurred. Once the tenderer’s offer was accepted by the proprietor, the document (SACON, Adelaide Entertainment Centre Construction, Vol. 1, 1989) required that the tenderer:

\[ \text{...enter into an agreement with the Primary Consultant to prepare documentation...and to provide professional inspection of the work...and other professional services...as specified in Appendix A of these Conditions of Tendering.} \]

The principal consultant was further able to engage other so-called secondary consultants, but this was to be at their own cost. The tenderers were required to submit, as part of their tender, written evidence as to the agreement reached between themselves and the principal consultant, and whether such agreement was in accordance with the terms and conditions as required under the contract.

The tender validity period was sixty days from the tender closing date, and the information which was furnished with each tender submission included the following (SACON, Adelaide Entertainment Centre Construction, Vol. 1, 1989):

(a) Written evidence of tenderer’s and principal consultant’s willingness to enter into an agreement with each other;
(b) Schedule of daily prolongation costs;
(c) Construction programme outline;
(d) Monthly cash flow (estimated);
(e) Details of construction methods to be employed;
(f) Confirmation of construction team members;
(g) Names of proposed sub-contractors;
(h) Option prices; and
(i) Value of imported content.

A formal bill of quantities was not provided, but a ‘Schedule of Indicative Bulk Quantities’ was produced. The information contained therein was not guaranteed as being accurate, and
was for tenderers information only. It did not form part of the contract.

With regard to site information, tenderers were supplied with information relating to ground and sub-surface conditions (geotechnical report and survey drawings). This information was also not guaranteed and tenderers had to make their own assessments as to the conditions of the site. A site inspection for tenderers was organised on one particular day. Trenches were excavated at locations throughout the site and tenderers were at liberty to inspect same. Trenches were later backfilled.

Tenders were submitted on the condition of two alternative dates for practical completion. The first was the 28th June, 1991, and the second was the 15th April, 1991.

(b) CONSULTANTS AGREEMENT

The consultant’s agreement was written with respect to the principal consultants, Hassell Pty Ltd Architects. There were certain terms and conditions which had to be included in the agreement or sub-contract that ultimately would be entered into by the principal consultant and the builder. These terms and conditions included the services which were to be provided by and the obligations of the principal consultant.

Services included preparation of working drawings, specifications, and other documents in compliance with the design Brief; regular professional inspection of construction work to ensure compliance with documentation and standards required; and attendance at all project management team meetings (together with the builder) as organised by the superintendent.

The obligations of the principal consultant included instruction, co-ordination and overview of all work as executed by secondary consultants; preparation of fully comprehensive, accurate and adequate documentation in conjunction with the builder; and regular inspection of the work to ensure compliance with the documentation and contract.
(c) **BUILDING CONTRACT**

The building contract used for this project consisted of two parts:

(a) NPWC 3 (1981) General Conditions of Contract; and
(b) Special Conditions of Contract.

The incorporation of the latter meant that the first standard contract was amended for the purposes of this project. Since NPWC 3 has already been discussed in Chapter 5, consideration will now be given to the Special Conditions of Contract.

Contained within the Special Conditions of Contract were several clauses, the most important of which was called the ‘Paramount Clause’ since this was to be interpreted as being paramount to the contract. It outlined the desired results in respect of the performance of the contract (SACON, Adelaide Entertainment Centre Construction, Vol. 1, 1989):

(a) Execution of the works by the builder in accordance with the Existing Documents and the Builder’s Documents;
(b) Preparation by the builder of such Builder’s Documents;
(c) Engagement of the principal consultants by the builder and assumption of full responsibility for design, documentation and construction of the works; and
(d) Principal consultant’s inspection of the works at each stage of construction.

The Paramount Clause also specified that upon entering into the contract, the builder assumed full responsibility to the proprietor for designing and constructing the works, including for the contents of the Existing Documents (excluding the design Brief), Schedule of Indicative Bulk Quantities and any other written information required. At the same point in time, the proprietor acknowledged responsibility for the design Brief and ‘...that the functional planning relationship shown in the Existing Documents meets the requirements of
the Design Brief' (SACON, Adelaide Entertainment Centre Construction, Vol. 1, 1989). The Existing Documents contained within them information regarding performance criteria applicable to the project, the details of which the superintendent was empowered to interpret.

The builder accepted responsibility for the preparation of the design, documentation and execution of the works and was not entitled to claim for variations, delays or other such factors that were due to inaccuracies, errors, ambiguities or omissions in drawings, computations and other documents as prepared by the consultants engaged. The builder's responsibility (SACON, Adelaide Entertainment Centre Construction, Vol. 1, Sub-clause 8.6, 1989) was defined as:

The [Builder] acknowledges the [Proprietor] relies upon the skill and judgement of the [Builder] for the documentation of the Works, the choice of materials, systems and services to be used therein and the construction, completion and commissioning thereof. The [Builder] shall warrant that all documentation, materials and workmanship are and will be proper and adequate for their respective functions and purposes and that the Works will be constructed in a proper and workmanlike manner under adequate and competent supervision.

All rights to intellectual property remained with the proprietor. This included sketches, plans, drawings, specifications, designs, calculations, estimates, reports, photographs, and any other documents produced by the principal consultant.

The Special Conditions provided for the builder to enter into an agreement with the principal consultant. This agreement had to be finalised within a period of fourteen days from the date of tender acceptance. The terms and conditions of the agreement take the form of those specified in the Conditions of Tendering applicable to the contract, as Appendix A. Inherent in the agreement was a requirement that the principal consultant be bound to observe, perform and comply with all the provisions of the contract. Although the original Consultant's Agreement referred to an agreement between the principal consultant and the proprietor, this clause provided for the builder to take over the obligations of the proprietor as if such provisions were provided for severally in the agreement. However, (SACON, Adelaide

Notwithstanding any such nomination the [Builder] shall be liable to the [Proprietor] for the acts, defaults and neglects of the [Principal] Consultant or any employees, professional consultants or agents of the [Principal] Consultant as fully as if they were the acts, defaults or neglects of the [Builder] or the employees, professional consultants or agents of the [Builder].

The agreement could be terminated if the principal consultant became bankrupt or defaulted in some other way. The builder also had a responsibility to ensure that the principal consultant held and continued to hold professional indemnity insurance commensurate with the amount specified in the Annexure of the contract. Such insurance was to cover all loss and damage of any kind that may have been attributable, directly or indirectly, to the principal consultant.

The issue of consultants becoming involved in certification procedures was considered earlier in this chapter (refer Item 8.4.8). It is suggested that consultants not become involved in this matter as it may prejudice their professional indemnity insurance. However, this particular contract provided for just that situation with respect to certification of inspected work (SACON, Adelaide Entertainment Centre Construction, Vol. 1, Sub-clause 10.4, 1989):

The [Builder] shall supply to the Superintendent with each progress claim his certification endorsed by the [Principal] Consultant that the work under the Contract has been carried out in accordance with the Design Brief and the requirements of the final documentation, specification and standards of finish, or if the [Principal] Consultant cannot so endorse, the [Builder] shall supply to the Superintendent the [Principal] Consultant's report as to why it cannot so endorse.

This endorsement of certification also applied to the attainment of practical completion and upon expiry of the defects liability period. Although it may be argued that technically it is the builder who provides the certification, the principal consultant may not be relieved of associated responsibility since to 'endorse' something essentially means to approve, sustain or support it.
Under this contract, the builder was entitled to claim for any actual extra costs that may have been incurred. Recovery of damages, loss or costs were not permitted. Causes (SACON, Adelaide Entertainment Centre Construction, Vol. 1, 1989) included:

(a) Deviation from a construction programme directed by the superintendent;
(b) The need for deviation or direction due to an act or omission on the part of the proprietor, superintendent or other such agent, employee or consultant thereof; and
(c) The need for deviation or direction did not arise nor was due to industrial dispute; any act or omission not directly related to the contract or the works; any act or omission on the part of the superintendent or proprietor which was not in the course and within the scope of his employment; and weather conditions preventing execution of the work.

The Special Conditions made provision for variation of the date for practical completion. Such variance would be authorised by the superintendent (SACON, Adelaide Entertainment Centre Construction, Vol. 1, 1989) and related to delays as a result of the following:

(a) A variation to the work pursuant to sub-clause 40.1 of the General Conditions of Contract (NPWC 3);
(b) Any loss or damage due to Excepted Risks (sub-clause 16.2);
(c) Failure by the proprietor to give the builder possession of site;
(d) Deviation from the construction programme by the superintendent;
(e) Suspension of the work (sub-clause 34.2) due to no fault of the builder; and
(f) Industrial dispute not caused by action attributable to the builder or his operations.

These were the only circumstances under which an extension of time would have been granted.

Novation contracts do not normally entertain the concept of variations. However, this
particular contract did make such a provision. Variations were valued under sub-clause 40.2 of the General Conditions of Contract, but it was specified that no variation should invalidate the contract.

The Special Conditions covered issues relating to industrial relations. There existed a requirement (SACON, Adelaide Entertainment Centre Construction, Vol. 1, 1989) that the builder, the builder’s agents or sub-contractors ensured that all employees (excluding professional and supervisory personnel) were:

(a) paid in accordance with award classification and under award conditions;
(b) covered under the provisions of the Workers Rehabilitation and Compensation Act, 1986, and Workcover where applicable;
(c) informed of site safe work practices and that policies relating to occupational health, safety and welfare maintained in accordance with regulations; and
(d) financial members of a union appropriate to the position of employment.

In relation to item (d) above, the State of South Australia promotes and enforces the rules and regulations applicable to its comprehensive anti-discrimination laws, yet it actively supports “No ticket no start” practices on its own construction projects and sites (signs placed on hoardings of all major sites). This raises questions as to the justifiability of political decisions in regard to industrial relations issues.

8.7.5 Overview

During the course of research of this Case Study, interviews were had with several participants involved in the Adelaide Entertainment Centre project. These included representatives of the project manager, the principal consultant and sub-consultants. Communications to the builder and building consultant requesting interviews were not answered. Discussion is, therefore, limited to information as offered and relayed to the
Although this was not the first novation contract to be employed on a project in South Australia, it was perhaps the most publicised. It is understood (R. Power, personal communication, 2 October, 1991) that the first South Australian novation contract was The Exhibition Hall, North Terrace, Adelaide. This could also be described as a government project, and construction cost was of the order of $15 million. Research has revealed (R. Power, personal communication, 2 October, 1991) that in this particular case, problems did arise with respect to the sub-soil conditions which ultimately resulted in attempts by the builder, Baulderstone Hornibrook Pty Ltd, to pursue the matter legally. However, further investigations were unrewarded since the parties concerned were reluctant to divulge any more information pertaining to the case.

It was claimed by A. Evans (personal communication, 17 September, 1991) and J. Freeman (13 November, 1991) that the project was very successful. The reasons given were that the project finished on budget and ahead of schedule. There were no major disputes or on-site problems and a belief existed (J. Freeman, personal communication, 13 November, 1991) that this novation contract was "never really put to the test" by the occurrence of such disputes or on-site conditions. It was also claimed that during the course of the project there existed "a good working relationship" between all the primary participants.

Some difficulties did arise with respect to the design of the catering facilities. This was as a direct result of the fact that the end-user was not decided upon until approximately mid-way through the course of construction. As a consequence, some proprietor-requested variations were necessary. The proprietor was aware that to call for the execution of variations meant the payment of additional costs. Therefore, such requests were kept to the relatively small number of approximately twelve, at a cost of $110,000 (J. Freeman, personal communication, 13 November, 1991). Any changes requested were initially costed by the researcher by respective interviewees.
builder, then sent back to the project manager for consideration. Variations were always priced on the basis of no further claims arising out of same.

It is claimed (J. Freeman, personal communication, 13 November, 1991) that some "backlash" was experienced from sub-contractors during construction. This was primarily due to them not being fully aware of the risks for the builder (and thus the sub-contractor) in a novation contract. The result was that some sub-contractors were unable to recoup losses through variations as may have been the case in a more traditional system of delivery. It is asserted (A. Evans, personal communication, 17 September, 1991) that the principal consultant did not become involved in the assessing of variations nor the pricing of them. This was carried out by the project manager. Any changes to the design or documentation which were instigated by the builder did not, with the exception of some two or three instances, need to gain the approval of the project manager. Information relating to such changes were merely reported by the project manager to the proprietor. Any such changes (A. Evans, personal communication, 17 September, 1991) still had to meet the requirements of the original design Brief and performance criteria.

Additional work was carried out after this contract concluded and since formal completion, another $1 million was spent to accommodate changes and additions and rectify problems associated with the original contract (J. Freeman, personal communication, 13 November, 1991). The project manager considered it more appropriate to finalise the original contract and then formulate a new second contract for the additional work. It was believed that such procedures overcame the potential problems associated with trying to vary a novation contract. It may be argued that this demonstrated the need to abide by the terms and conditions of a novation contract. To allow anything else may have resulted in an "unsuccessful" project, system of delivery and form of contract.

There were five tenderers, namely Jennings Construction Ltd, Boulderstone Hornibrook Pty Ltd, SABEMO, Hanson & Yuncken and Concrete Constructions. All tenderers were at liberty to
seek alternative solutions for aspects of the project, and they confidentially consulted with
the principal consultant. It was claimed (J. Freeman, personal communication, 13
November, 1991) that a short tendering period of six weeks was deliberately nominated.
This was in contradiction of the opportunity given tenderers to investigate alternatives. The
reasoning behind this being that although alternatives could be considered, the nature and
scope of same was deliberately limited. Consequently, alternatives for major aspects such as
the structural system could not be investigated. This meant that the preliminary
development programme (as determined by the project manager) would not be jeopardised.

The tenders received were able to be broadly split into a high and low category, since tender
prices varied considerably. It was assumed (R. Power, personal communication, 2 October,
1991) that such variance was due to some sub-contractors, aware of the risks associated
with a novation contract, not being willing to take that risk and, therefore, attempting to
cover same. Alternatively, they may not have actually understood the principles of the
novation system of project delivery. It was proposed that the zealous pricing of risk by one
of the tenderers, namely Baulderstone Hornibrook Pty Ltd, may have been as a consequence
to the difficulties that builder experienced on The Exhibition Hall project as previously
discussed. The initial tenders received for the project were considered too high overall (A.
Evans, personal communication, 17 September, 1991) and the preferred selected tenderer
became involved in negotiation proceedings. The result was that some "risk was unloaded".
This related primarily to problems associated with industrial matters and federal award
issues.

Formal meetings were held post-novation and, in particular, during the construction stage.
At times, issues arose which required the project manager to mediate between the builder
and the principal consultant. Such situations were most frequently related to matters
incapable of achieving resolution or agreement between the builder and the principal
consultant.
The Adelaide Entertainment Centre was referred to as a “political project” (R. Power, personal communication, 2 October, 1991). The reasoning behind this claim was that the State Government had been promising the development of this facility for some period of time. A State election was looming in the near future and, thus, it became an important issue. Associated with the project was a need to deliver it on time and within budget. This effectively made it a potential target for industrial action, however, industrial action was all but non-existent. One reason may be that the unions involved were more than adequately catered for (refer Item 8.7.4(c), this chapter) with respect to terms and conditions. Another reason may be that the $600 million Myer Remm development was under construction in Adelaide’s city centre. This project was suffering from considerable industrial unrest. As a result, industrial action was reportedly focused away from the Adelaide Entertainment Centre project (R. Power, personal communication, 2 October, 1991).

Quality assurance issues were only partially addressed on this project. Although a true quality assurance programme was not employed (refer Chapter 9 for further information), quality control was still sought. This was achieved by calling for sample panels which then provided the basis for judgement of “acceptable quality” by the principal consultant during the execution of the works. Likewise, implementation of a quality assurance programme did not form part of the tendering conditions. Mention has already been made in regard to the endorsement of the builder’s progress claims by the principal consultant and the potential liability associated with it. It was claimed (R. Power, personal communication, 2 October, 1991) that in respect of progress claim certification, the principal consultant restricted their terms of reference to matters of quality of work executed. They reportedly did not enter into assessment of claim valuations. Such monetary evaluation was carried out by the project manager. The principal consultant had the power to refuse to endorse a progress claim if standards were not achieved in accordance with the contract. It was revealed (J. Freeman, personal communication, 13 November, 1991) that the principal consultant did cause some delay with respect to the endorsement of the final certificate. Such delay
related to rectification of defective work.

In summary, this project was viewed by the primary participants as being a successful one, the reasons for which have already been outlined. The true success or otherwise of the contract and the novation system of delivery was not tested in this case since major disputes did not arise. The performance of a particular contract or delivery system cannot be tested unless the contract is called upon to be interpreted and terms and conditions enforced. Considering the lack of industrial action and high level of co-operation between the parties involved, it may be argued that the same level of success could have been achieved regardless, had a different contract and delivery system been employed.
8.8 CASE STUDY 2: TELECOM HEADQUARTERS, MELBOURNE, VIC.

8.8.1 Project Details

Project: Telecom Corporate Headquarters Building.
Address: Cnr. of Exhibition and Lonsdale Streets, Melbourne, Victoria.
Proprietor: Australian Telecommunications Corporation (Telecom).
End User: Australian Telecommunications Corporation (Telecom).
Architect: Perrott Lyon Mathieson Pty Ltd.
Engineers: Connell Wagner Pty Ltd (Structural).
Lincoln Scott (Services).
Quantity Surveyor: Rider Hunt Melbourne Pty Ltd.
Builder: Grocon Limited.
Project Manager: Project Planning and Management
Project Consultants: Institutional Developments Pty Ltd in association with Rider Hunt Melbourne Pty Ltd.
Legal Consultant: Terence Burke.
Construction Cost: $200 million (approximately).
Construction Time: Commenced- Early 1987 (inception).

May 1988 (design process).
January 1989 (tenders called).
May/June 1989 (contract let).
July 1989 (construction).

Completed - August 1992 (main building).
Figure 8.3: Case Study 2
Telecom Headquarters, Melbourne, Vic.
8.8.2 Project Description

(a) OBJECTIVES AND HISTORY

This is claimed (T. Burke, personal communication, 18 May, 1992) to be the first major novation contract, in contemporary terms, undertaken in Australia.

The proprietor had originally dealt with the Department of Administrative Services regarding development of their project. The proprietor (B. Cooper, personal communication, 18 May, 1992) was reputedly unhappy with the results of negotiations. At the same point in time, the rules controlling the use of non-government consultants changed and the proprietor began to investigate alternative sources of assistance. The proprietor was aware of the design/construct method of project delivery, but had reservations about the lack of definition involved in such a system. That is, they did not know what they would get for the money they were considering expending. The project consultants were then approached. The decision to construct a purpose-built building came about as a result of considerable investigation into alternative ways of acquiring suitable accommodation. A suggestion had been made by the proprietor that a building of some eighty storeys in height be developed. The project consultants prepared a feasibility study on the scheme and it was found that this proposal could not be justified. They were then asked to develop a delivery system, and subsequent contract, that would provide for a single line of responsibility. Proposals were then put forward by the legal consultant and others suggesting ways of achieving this.

During the course of the project, the composition of the Board of Telecom (the proprietor) changed. It subsequently put forth an instruction that investigations be made into the feasibility of utilising existing buildings available in the rental/leasing marketplace. This eventually proved unsatisfactory, and the new development proposal continued.
The New Corporate Building is located within a “Telecom precinct” which accommodates not only this building but also the Exhibition Telephone Exchange facility. The building comprises a forty seven storey tower which provides sixty thousand square metres of office space, a three storey podium, and three levels of basement carparking.

The podium (Australian Concrete Construction, January/February 1992, p.8) has been:

\[\text{...designed to match the scale and detail of six existing buildings which are being retained and refurbished as part of the project and [features] the extensive use of polished precast concrete panels, while the tower is clad in glass and aluminium.}\]

The tower itself has a stepped profile and the service core is exposed over the last twelve storeys. In addition, there is a twenty five metre high steel mast at the building’s top. The building has a reinforced concrete structure and, due the successful tenderer’s ability to work with this structural system, and use of a jumpform system for the core’s erection, a saving of some one hundred days was achieved in the construction of the structural frame (Australian Concrete Construction, January/February 1992, p.8). The service core is centrally located and, due to the use of a perimeter frame, the remaining floor space is column free. The service core accommodates low, medium and high sky-rise lifts, kitchen and toilet facilities, fire escape stairs and service risers.

8.8.3 Management

As part of their appointment, the consultants were asked to select for the project a suitable team of design consultants, in conjunction with the proprietor’s representatives and the project manager. The selection process was divided into two stages. The first involved a pre-registration procedure from which a group of ten or twelve consultants were chosen. The second was known as formal registration. This resulted in five or six consultants being subjected to a detailed vetting process. The successful consultants were eventually chosen on
the basis of their expertise and individual personalities. The architectural consultant was considered (B. Cooper, personal communication, 18 May, 1992) to be "good developers' architects". It was reportedly considered important, by the proprietor, the project manager and the project consultants, that the design consultants, in particular the architectural consultant, be able to work co-operatively with the proprietor and the subsequent successful tenderer. However, the architectural consultant did not consider it important to have a proven good working relationship with the successful tenderer (B. Mathieson, personal communication, 30 September, 1991). The tenderers' capacity to perform together with a good proven industrial relations record was considered to be of paramount importance. It is claimed (B. Cooper, personal communication, 18 May, 1992) the project consultants developed the consultants' fee agreements for the pre-novation and post-novation phases.

The role of the project consultants was of primary importance during the pre-novation phase. In addition to being required to determine the design team, they were also responsible for maintaining a development programme. There was often a need to speed up proceedings so as to ensure the project kept within the bounds of its original time frame. This involved organisation of the design consultants and continual approaches to the proprietor to ensure that any information required of same was supplied on time. After novation had taken place, the project consultants' role changed. All managerial responsibilities they had previously held were transferred to the builder. The project consultants did, however, retain a monitoring role.

The design and documentation was approximately fifty percent complete when the project went to tender (B. Mathieson, personal communication, 30 September, 1991). It is claimed, however, that a relatively detailed design was still achieved. The documents reportedly showed the full extent of quality of finishes and quality of work and illustrated the total scope of the project. Items such as the weight of steel per square metre of concrete was determined pre-tender. The architectural consultants also carried out a considerable amount of site investigation work at the pre-tender stage. It was considered important that a 'credible
package' of information be used for tendering purposes (B. Mathieson, personal communication, 30 September, 1991). It is unclear, however, whether this was a need defined by the proprietor or the consultant. It may be argued that it was of greater concern to the latter party, since they were the ones who retained ultimate responsibility for the documentation as prepared.

The initial selection of potential tenderers was similar to that employed for the selection of the design consultants. Unlike some other novation projects, this project did not provide for the tenderers to use alternative consultants during the tender stage. They were, however, able to investigate alternative solutions for aspects of the proposed building. An example of this is that the successful tenderer suggested the use of a jumpform system, in lieu of a slipform one, for the erection of the reinforced concrete core. This was eventually adopted and savings in time were ultimately achieved.

There were reportedly (B. Mathieson, personal communication, 30 September, 1991) six tenderers invited to prepare offers, and the architectural consultants were involved in the evaluation and selection process. These included Grocon Limited, Civil and Civic, Podgor, Lewis Constructions and John Holland. The tender period was a relatively short four weeks. It has been claimed (B. Cooper, personal communication, 18 May, 1992) that the current building cost coincided with the project estimate prepared some five years earlier in 1987. This raises the question of the existence of a 'fair' price. That is, considering the cost increases associated with building materials and labour that have occurred over this five year period and the volatility of the Australian building industry generally, the ability to accurately predict such costs so far in advance seems rather extraordinary. It may be argued that the original cost determined was very excessive. There may be two reasons for this, the first being a simple case of the provision of significant, but defensible, 'safety margins'. The second is that since the price was originally prepared while the building boom existed, unjustifiable levels of profit were being provided for. Whatever the real reason, the proprietor reportedly (B. Cooper, personal communication, 18 May, 1992) did not express
any concern with the price paid. This could be due to a level of ignorance concerning the
nature of the Australian building industry or, alternatively, it could be due to the proprietor
simply being happy that the first price proposed equated with the final one paid.

Post-novation, the builder incorporated the architectural consultant’s services in a
relatively traditional sense. This included the consultant having the ability to request
remedial action for any faulty work executed or materials and equipment supplied. The
builder also reportedly (B. Mathieson, personal communication, 1991) engaged them, under
a separate agreement, to provide administrative services during the construction stage since
the original agreement has ceased at the end of the documentation stage. The architectural
consultant’s advice was actively sought by the builder, but they did not enter into the
practice of issuing traditional architect’s instructions. They did, however, issue
‘recommendations’ to the builder. The principal consultant was not involved in any matters
associated with cost control or cost management.

In addition to the main contract there existed three separate and independent contracts for
fitout work. These were developed to meet a need for staged handover to the proprietor. The
portions of the building involved were approximately equal and corresponded with the
location of plant rooms and differing lift installations. The tenders for each separate contract
incorporated their own margins for profit and costs associated with preliminary items and
overheads. It is understood (J. Nance, personal communication, 23 April, 1992) that the
work associated with these separate contracts was undertaken by the same builder as for the
main contract. The conditions and price of the builder’s offer remained static. The proprietor
had the option to accept handover at any time suitable to them i.e. at their convenience. If the
proprietor was not ‘ready’ to take over the portion of the works, then it would remain in the
builder’s control, the price and responsibilities for which also remained unchanged.

Responsibility for the drafting of the building contract was held by the project manager. The
contract used was based on an amended version of NPWC 3, and took approximately six
months to finalise. The project manager administered the contract during the construction stage.

8.8.4 Contractual Documents

Analysis of contractual documents covers the most important or relevant issues thereof. Discussion is limited to the documents which were obtainable and/or released for research purposes at the time of investigation into this Case Study.

(a) CONDITIONS OF TENDERING

The actual conditions of tendering for this project were not able to be obtained. Matters associated with the tender process have been discussed previously in this Case Study.

(b) CONSULTANTS AGREEMENT

The proprietor has developed a standard format consultant agreement for its development projects. Due to reasons of confidentiality, investigations were unable to procure a copy of the specific document used for this particular project. However, a copy of the standard agreement which it is understood formed the basis of the agreement in this case, was obtained. It is this document, known as a ‘Consultancy Contract’ which will now be considered.

The consultant’s agreement refers simply to a ‘consultant’. Unlike some other novation contracts it does not differentiate between principal and secondary consultants. Although both forms of consultant may exist, this agreement actually refers to an ‘architect’. The responsibilities of the consultant included the following (Australian Government Solicitor, Consultancy Contract, Clause 3.2):
(a) Performance of services at 'a high professional standard applying the skill and diligence and practice of a professional architect';

(b) Performance of services within a specified time period, or if no such period is specified then in a time span commensurate with that 'expected of a competent professional architect';

(c) Retention of full responsibility for the services irrespective of any review or acceptance of same by the proprietor or their representative;

(d) Employment of 'competent professional staff with qualifications and experience appropriate to their task...';

(e) Notification to the proprietor of any inaccuracies or insufficiencies in information as supplied by them;

(f) Ensure compliance of services with provisions under all relevant acts, regulations, laws and so on applicable to the works; and

(g) Immediate advice to the proprietor of any conflicts that may exist between the requirements of the works and any acts, regulations or other controls.

The consultant's services are described in Annexures A and B of the document. The latter relates to the tender and letting of the building contract. The agreement (Australian Government Solicitor, Consultancy Contract, Clause 4) goes on to state that any other minor items not listed in the annexures, but nevertheless which need to be provided in order to complete the service, must be provided by the consultant at no extra cost. If, however, the consultant is requested to provide additional services for the purposes of evaluating alternative design proposals, this may lead to a situation whereby the consultant may be entitled to claim extra fees. The clause expressly states that under this agreement, the consultant is not required to provide or perform supervision work under the building contract.

Annexure A specifies the services to be provided. The principal aspect relates to the stages of production. Architectural documents are required to be provided in three definitive stages.
The first is the schematic design stage and includes preparation of schematic drawings and reports. This must be co-ordinated with the preparatory work of other consultants such as engineers. Indicative costs may also be requested. This work may need to be developed further within this stage. Stage two is that of initial documentation. This may be of the order of forty to fifty percent of the total completed documentation. It involves preparation of working drawings suitable for tendering purposes, including information on all structure and service engineering components. The third stage involves the total completion of all documentation, and thus represents the balance of work done in stage two.

Annexure B deals with the services required during tender and the letting of the tender. This document calls for a condition to be included in the tender documents requiring the builder to provide the proprietor with a deed of novation immediately following the execution of the building contract. The consultant is also responsible for the issue of tender documents to the respective tenderers. Services associated with receiving, analysing and answering any tenderers questions must also be provided. Tender analysis also involves the consultant providing the proprietor with a recommendation as to the preferred tenderer for the proprietor's selection. This annexure actually specifies the basis on which an evaluation is to be made and includes the following (Australian Government Solicitor, Consultancy Contract, Annexure B, Clause 4):

(a) A list of the names of all tenderers who lodged a tender together with their respective tender sum;
(b) Previous performance record of each tenderer;
(c) Tenderers' current work commitments, including percentage of work completed and anticipated completion dates;
(d) Current physical resources;
(e) Financial status;
(f) Proposed financial anticipated expenditure chart; and
(g) A copy of each tenderers' construction programme.
With respect to item (e) above, details are not provided as to whether it involves the relaying of information as supplied by the tenderer, or if the consultant is responsible for investigation of such status. If the latter situation applies, the consultant would need to be extremely careful in making any recommendations as to selection. The difficulty lies with the liability inherent in such action. That is, if the consultant makes a recommendation for selection, which is ultimately accepted on the basis of indicative financial status and, for some reason, the builder later suffers financial failure or undergoes bankruptcy, the potential exists for the consultant to be held liable for such recommendation.

The consultant is required to provide the proprietor with written reports upon request in respect of the progress of the performance of the services under the agreement.

If the proprietor determines that the nature or form of the works should be varied, then there is due and payable to the consultant an extra fee for services involved in satisfying such requirements. Approval of such extra fees must be obtained prior to the execution of any work associated therewith. The proprietor (Australian Government Solicitor, Consultancy Contract, Clause 6) does:

> ...reserve the right, at any time, to alter, qualify, or reject any design, conclusion or recommendation made by the Consultant under the Contract, provided that [the Proprietor] shall indemnify the Consultant for any liability incurred by the Consultant because of such alteration, qualification or rejection.

With respect to payment of fees, these are actually specified, in dollar terms, in the agreement. There is, therefore, little risk of dispute over the amount which may be due and payable for services rendered. The agreement provides for payment to be made in progress amounts, in arrears. Provisions exist, however, whereby the proprietor is only obliged to make such payment if same is satisfied that the consultant has met all applicable obligations under the contract.

Under the agreement, the proprietor also has obligations. One of these is the provision to the
consultant (Australian Government Solicitor, Consultancy Contract, Clause 8) of:

...instructions adequate to define [the Proprietor's] requirements, including matters relevant to [the Proprietor's] program and budget relevant to the Works.

[The Proprietor] shall provide all legal, survey and other particulars concerning the site, including details of existing structures, adjacent buildings and services.

Under the agreement, copyright remains with the proprietor. This includes all drawings, specifications and other documents produced by the consultant in performance of the contract. This covers any work done prior to or after the effecting of the contract. If the consultant makes mistakes or other errors in the documents as prepared, no additional fees will be forthcoming to rectify same.

The agreement calls for the provision and maintenance of professional indemnity insurance by the consultant. Such indemnity is directed towards the proprietor, and must be held for the duration of the contract. The actual minimum amount of cover required is specified in dollar terms, and the insurance company proposed to be used must meet with the approval of the proprietor. The consultant is required to indemnify and keep indemnified (Australian Government Solicitor, Consultancy Contract, Clause 12.1) the proprietor from and against:

...any claim, demand or proceeding that may be made or brought by any person against [the Proprietor] or the employees, professional consultants or agents of [the Proprietor] or any of them in respect of personal injury to or the death of any person whomsoever or loss or damage to any property arising out of or as a consequence of a breach of the Contract by, or any unlawful or negligent act or omission of, the Consultant or its employees or agents in carrying out the Services and also from any costs and expenses which may be incurred in connection with any such claim, demand or proceeding...

The agreement may be terminated at any point in time. The provisions for this relate to termination by mutual agreement or, alternatively, by the proprietor if the consultant fails to perform or complete applicable obligations under the contract. The agreement also provides for dispute resolution. Like many contracts for the provision of services, this one provides for a staged procedure. The first step is for the disputing party to notify the other
party of the problem and reasons therefor. If this fails, the dispute is referred to a second independent body for conciliation. Failing this, arbitration may be sought. There are, however, quite specific conditions which apply to the way in which the matters are treated.

With respect to this Case Study, the consultants' fees were defined on a stage by stage basis (J. Nance, personal communication, 23 April, 1992). The breakdown consisted of a specified amount for the concept and schematic design stages. Fees for the design development stage were based on a percentage of the cost as estimated by the quantity surveyors, while the fees for the preparation of the construction documentation became a percentage of the tender price accepted.

(c) **DEED OF NOVATION**

The deed of novation was actually located within the Deed and General Conditions of Contract, although it was referred to as being a separate document. It was known as Annexure A. As with any deed of novation, this one provided for a transfer of responsibilities and the replacement in the contract, post-novation, of the proprietor by the builder. When this transfer became effective, the proprietor was relieved of any previous responsibilities and obligations and the builder became liable not only for work to be done but also for any already performed. The builder also accepted the terms and conditions of the consultancy agreement. Likewise, the consultant agreed to perform for the builder in the same respect as was applicable in the first instance to the proprietor. The deed, however, did state that although the builder took over the proprietor's role and responsibility, matters relating to copyright and ownership remained vested in the proprietor.

In this case there actually existed two deeds of novation. One applied to the architectural consultants, namely Perrott Lyon Mathieson Pty Ltd, and the other to John Connell Holdings Pty Ltd. Each consultant effectively had the same responsibilities, obligations and liabilities during the course of the project.
(d) **BUILDING CONTRACT**

This particular contract was based on an NPWC 3 form of contract, but was effectively re-written for use on this project. Therefore, unlike some novation contracts this document did not have any ‘Special Conditions’ associated with it. The General Conditions of Contract set out the terms and conditions applicable to the building contract.

The contract provided for the builder to be responsible for the design, documentation and construction of the project as defined. The builder was required (Deed and General Conditions of Contract, Clause 1.1) to:

> ...comply with the requirements of and the design intent shown or described in the Contract Documents; and...prepare detailed construction drawings, design documents and specifications necessary for the construction of the Project.

The builder was required to warrant that any documentation prepared complied with the proprietor’s requirements, relevant regulations and legislation, did not infringe patent or copyright and were suitable for their intended purpose.

The builder was also required to provide specific management services with respect to the project. These included (Deed and General Conditions of Contract, Clause 1.3):

(a) Establishment and maintenance of records and registers as required by the proprietor;

(b) Periodical reporting on aspects as requested by the proprietor;

(c) Advising the proprietor of progress;

(d) Advising the proprietor of actual and anticipated cash expenditure;

(e) Arrangement of meetings between the proprietor and the design team as necessary to enable progress to be monitored; and

(f) Attendance at and reporting to ‘Project Control Group’ meetings.
Item (e) above is contrary to the conditions which usually apply to novation contracts. In most such projects, the proprietor relinquishes any rights to direct contact with the consultants once novation has occurred. This particular contract expressly provided for contact between the consultants and proprietor to continue. It is stated that such contact is for the purpose of monitoring progress. In this situation there exists a very real need for the builder to be strict in controlling proceedings so as to avoid the risk of the proprietor continuing to dictate operations or influence decisions. It is in the builder’s interest that such a situation not be permitted to develop, since it is the builder who has accepted responsibility for all the work performed encompassing the past, present and future. The builder must, therefore, have adequate control over all aspects of the project.

Under Clause 2 (Documentation) of the contract, all rights to copyright, whether they be related to design drawings, specifications and/or construction drawings were vested in the proprietor. The builder did, however, have a licence to use such documentation. This clause also called for the builder to provide the proprietor with three copies of sub-contract packages prior to seeking tenders for them. The builder was then required to analyse those tenders and report to the proprietor accordingly. By requiring that this course of action be undertaken, the proprietor was able to vet any proposals and thus maintained a degree of control over the work. Influence could have taken the form of exercising control over compliance with the design Brief and contract documentation.

Clauses 3.3 to 3.5 inclusive covered aspects associated with the risk of latent conditions on the site. Essentially, the builder accepted sole responsibility for the ‘physical conditions and characteristics’ of the site and its surroundings. This is irrespective of any information that may have been supplied by the proprietor, consultants or others. The proprietor also disclaimed any liability in contract, tort or otherwise, with respect to any costs, losses or expenses suffered or incurred by the builder due to negligence by the proprietor, the proprietor’s employees or consultants.
Mention has already been made to the existence of a 'Project Control Group'. The members of this group comprised representatives of the proprietor and the builder. The proprietor was also at liberty to request attendance by others such as design team representatives, suppliers or sub-contractors. The builder's duties, as a member of this group, included provision and distribution of a written report two days prior to scheduled meetings. The reports had to include details of the progress of design and construction against the overall construction programme (based on critical path method); details of any outstanding items with respect to the construction programme; any foreseen delays and the likely effect thereof; the status of activities under execution; expenditure against predicted cashflow and budget; status of industrial relations issues; and any other relevant matters.

Clause 6.1 of the contract called upon the builder to execute and deliver the deed of novation, while Clause 6.2 provided for the termination of the consultant. This clause stated that the builder could not terminate such appointment without the express written approval of the proprietor or unless the consultant had performed a fundamental breach of associated obligations under the agreement.

Clause 6.13 provided for the proprietor to arrange for others to execute separate fitout work without prejudicing the terms and conditions of the main contract. The builder (Deed and General Conditions of Contract, Clause 6.13) warranted:

...that it has taken into account the necessary resources, timing, use of facilities, hoisting and movement of men and materials, and co-ordination between the completion of the Project and execution of fitout work involved in the costing, planning and programming of the Project.

Likewise, Clause 15 covered aspects relating to the builder's offer to undertake fitout work in three stages, namely Stage A, B and C respectively. It included terms and conditions applicable to the offer, acceptance of that offer, non-interference with the work under the main contract, and the separate staging of the fitout work.
The issue of insurances, liabilities and indemnity was covered by Clause 8 of the contract. The builder was responsible for the care of the site and works from the date of possession to the date of practical completion. The builder was obliged to take out insurance for public liability and workers' or accident compensation and employers' liability. This contract also called for the builder to provide professional indemnity insurance. This latter insurance is one which is becoming more common in novation contracts, and is primarily a result of the fact that the builder has accepted responsibility for provision of professional services in the form of preparation of design and documentation work.

This contract provided for the builder being able to claim an extension of time provided the delay was not attributable to the builder. However, the acceptable sole causes of delay were expressly defined (Deed and General Conditions of Contract, Clause 9.5.6) thus:

- **(a)** breach of an express term of the Contract by [the Proprietor] or acts of prevention;
- **(b)** a variation;
- **(c)** a strike or industrial dispute which in either case also delays at least eighty (80) per cent of construction projects in the central business district of Melbourne having a contract value of more than thirty million dollars ($30,000,000);
- **(d)** the imposition of new requirements or change in requirements of authorities;
- **(e)** fire or earthquake;

The most interesting aspect of these provisions relates to item (c) above. The probability of the specified circumstances occurring would be relatively remote. Therefore, an extension of time could not have been claimed for any strike or dispute outside of this category. This negated the effects of industrial action specifically and solely relevant to this project.

The proprietor had the ability to request the builder to accelerate the progress of the works in order to meet a completion date in advance of the agreed date for practical completion. Under circumstances such as these, however, the proprietor would have to be careful not to make a request which would in effect result in the builder being able to claim extra costs for such acceleration.
The date for practical completion was defined (Deed and General Conditions of Contract, Clause 9.13.6) as ‘...the date [the Proprietor] considers the project has reached Practical Completion’. The builder had the option to notify the proprietor of a date by when the builder considered practical completion would be reached. The proprietor’s approval (or rejection) of the accuracy of this claim was required. Similar conditions and procedures applied to the final claim and certificate, except that in this instance, the final claim could not be lodged with the proprietor by the builder until after the defects liability period had expired. Lodgement, however, had to be made within twenty eight days of such expiry. The defects liability period in this case was fifty two weeks.

The principal consultant did not get involved in matters associated with progress payments to the builder. Under Clause 10 of the contract, the builder was required to submit, on a monthly basis, a detailed progress claim to the proprietor for payment. The proprietor had the right to approve or reject, in whole or in part, that claim. The proprietor would then issue the builder with a progress certificate and the relevant payment. Responsibility for checking of the builder’s claim rested with the proprietor.

The builder was entitled to delay costs, but these were limited to matters associated with the granting of an extension of time by the proprietor. Likewise, the proprietor was entitled to claim liquidated damages at a rate as pre-determined in the contract. As was the case with progress payments, the principal consultant did not get involved with matters relating to the valuation of variations. Variations were initially valued or estimated by the builder, but were then sent to the proprietor for approval. The builder was not permitted to execute a variation prior to agreement being reached on the value of same.

The contract provided for termination proceedings. The proprietor was able to terminate the builder’s appointment for substantial breaches of contract. These included (Deed and General Conditions of Contract, Clause 12.1):
(a) Failing to proceed with diligence and expedition;
(b) Failing to use materials or standards of workmanship required under the contract;
(c) Failing to comply with programming obligations;
(d) Failing to provide security; and
(e) Failing to provide evidence of insurance.

Likewise, the proprietor could terminate the builder’s appointment if that party became insolvent, was placed into receivership or bankruptcy, was wound up or underwent some other form of financial failure, however, the contract did not provide for termination by the builder. This could have created some difficulties had the proprietor suffered similar financial difficulties. It may be argued, however, that considering the nature of the proprietor in this case, the occurrence of this latter situation was an extremely remote possibility.

This particular contract made provision for dispute resolution, but the procedures adopted vary somewhat with other forms of novation contract. Clause 13 covered dispute resolution but referred to action being taken by the builder only, for such matters as failure by the proprietor to provide a determination or disagreement with the proprietor regarding a determination given. In this case, the first course of action required was that the builder notify the proprietor in writing giving reasons for the dispute. Failing this, or if the builder did not accept the proprietor’s determination, the matter could be referred to an ‘expert’. However, the contract did not provide for disputes to be referred to arbitration, since (Deed and General Conditions of Contract, Clause 13.1.2):

\[
\text{The decision of the expert shall be made as an expert and not as an arbitrator and shall be final and binding on the parties.}
\]

and, under Clause 13.2.5:

\[
\text{The expert shall be deemed not to act as an arbitrator and the determination of the dispute or difference in accordance with the Process set out in the Rules for the}
\]
Expert Determination Process is not a process of arbitration within the meaning of the Commercial Arbitration Act 1984 (Victoria).

The contract also included the following:

(a) Schedule to the General Conditions of Contract;
(b) Schedule of Elements of Contract Sum;
(c) Schedule of Cost Adjustment;
(d) Schedule of Delay Costs;
(e) Annexure A - Deed of Novation;
(f) Annexure B - Deed of Novation;
(g) Annexure A - Unconditional Undertaking;
(h) Annexure B - Rules for the Expert Determination Process;
(i) Annexure C - Code of Conduct for an Expert; and

8.8.5 Overview

During the course of research for this Case Study, interviews were undertaken with several participants involved in the Telecom Corporate Headquarters Building project. These included representatives of the project manager, the architectural, project and legal consultants. Communications to the builder, proprietor and other consultants requesting interviews were not answered. Discussion is, therefore, limited to information as offered and relayed to the researcher by respective interviewees.

Discussion has already covered aspects relating to the proprietor’s need and desire to become involved in a project which maintained significant design input on their part, but which still provided for single line responsibility. The result was employment of the novation system of delivery. The most interesting (and confusing) aspect of the recommendation to use novation relates to the claims made by several of the participants. Of all the people interviewed
regarding this project, no less than three claimed to be responsible for 'invention' of the novation system. These included J. Nance (personal communication, 23 April, 1992), B. Cooper (personal communication, 18 May, 1992) and T. Burke (personal communication, 18 May, 1992) respectively.

The legal principles of novation have existed for centuries and novation building projects, in one form or another, have been used in Australia for some four decades (refer Item 8.2, this chapter), therefore, such claims appear somewhat unjustifiable. It may be argued that these claims are being made for several reasons. One may be that due to the project's relative success, certain participants are attempting to claim responsibility and, therefore, credit. The other may be due to the as yet undefined origins of the use of novation in the building industry. That is, undefined in terms of being able to specifically assign invention, authorship or a date of inception. It may, accordingly, be argued that these ambiguities have, through their very existence, created a situation whereby several participants believe they are indeed responsible. There is little doubt, however, that out of the group of three claimants, one party would have promoted the idea before the other two. Investigations were unable to resolve just which party did, since none could or would specify a date or time frame relative to the 'conception of the idea'.

It has been claimed (B. Mathieson, personal communication, 30 September, 1991) that the proprietor acted like a "private client" towards the architectural consultant. As a result, the architectural consultant believed that the novation system of delivery would be equally suitable for private or governmental clients, particularly if the client was also the end user. Concern was expressed (B. Mathieson, personal communication, 30 September, 1991), however, regarding questions of representation of the proprietor's interests. That is, the architect (and other consultants) could subscribe to the proprietor's requirements during the pre-novation stage since during this stage there was little difference between this relationship and that which exists in a more traditional system of delivery. Post-novation, however, the consultants' roles, responsibilities and obligations changed, and they became
responsible to the builder. Unless an express condition existed whereby they had control or influence upon the quality of workmanship, materials and so on, the consultants would be unable to sufficiently enforce the maintenance of standards. Responsibility for quality would then be placed upon the proprietor. If the proprietor was unable to, or incapable of, adequately imposing controls, it would be the builder’s interests who were best served. The greatest problem perceived was that “there is no independent party” to represent the proprietor’s interests (B. Mathieson, personal communication, 30 September, 1991).

Examination of the building contract revealed that, although it was reportedly based on an NPWC 3 contract, it made no provision for inclusion of a superintendent. This role was effectively taken by the proprietor. Also, despite the fact the contract made provision for variations, none were reportedly carried out (J. Nance, personal communication, 23 April, 1992).

The vetting powers of the proprietor in respect of selection of sub-contractors, ensured that the best performers would be chosen. It was claimed (J. Nance, personal communication, 23 April, 1992) the builder was particularly concerned about time and money in conjunction with quality. This, in itself, led to the builder actively seeking out the best and most appropriate sub-contractors.

The issue of quality was of particular concern in this project. The General Conditions of Contract, under Clause 6.7, called for compliance with the proprietor’s quality assurance programme. It was implemented (B. Mathieson, personal communication, 30 September, 1991) on the documentation for the project as well as the construction phase. The resultant documentation from the quality assurance recording procedures were delivered to the proprietor at the completion of the project. The builder actually employed a quality assurance representative on site during the construction phase, and went to considerable lengths to ensure that all sub-contractors understood the principles of quality assurance and their responsibilities and obligations thereunder. Although the quality assurance programme
was implemented during construction, it was reportedly (J. Nance, personal communication, 23 April, 1992) used selectively (i.e. on elements constructed specifically for the project such as curtain walling). During the tender stage, the project manager asked tenderers to provide details as to how they intended to implement, monitor and operate their quality assurance programmes. They were also asked to define checking procedures associated therewith. The successful tenderer reportedly claimed that it intended to engage the consultants for such services. They were to be paid a separate independent fee for this service.

This project could be considered successful since it was completed on time and within budget. Some of the major reasons for this include the concrete erection technique employed and the lack of industrial unrest. With respect to the latter issue, there reportedly (J. Nance, personal communication, 23 April, 1992) only existed a series of “minor disputes” all of which were resolved quickly with no production days lost. No major industrial action was experienced on this project, and this was attributed to the builder’s use of an “old, loyal workforce”. In a further effort to minimise industrial unrest, the builder endeavoured to maintain a clean site thereby providing clean and safe working conditions. The project did experience some difficulties with respect to Department of Labour and Industry (DLI) regulations, however, for reasons of confidentiality, investigations could not reveal the nature or extent of the problems.
8.9 CASE STUDY 3: NEW COMMONWEALTH OFFICES, MELBOURNE, VIC.

8.9.1 Project Details

Project: New Commonwealth Offices (also known as ‘Casseldon Place’).
Address: Spring/Lonsdale/Little Lonsdale Streets, Melbourne.
Proprietor: Commonwealth of Australia.
End User: Commonwealth of Australia.

Engineers:
- Connell Wagner Pty Ltd (Structural, Civil).

Quantity Surveyor: W.T. Partnership.
Builder: Baulderstone Hornibrook Pty Ltd.
Project Manager: Australian Construction Services.
Superintendent: Australian Construction Services.
Superintendent's Consult's:
- Paul Steinfort & Associates (Programming).
- Rider Hunt Melbourne Pty Ltd. (Quantity Surveying).
- Derek Hendry & Associates (Building Regulations).
- Department of Administrative Services (Vertical Transportation, Land Survey, Quality Assurance).

Legal Consultant: Australian Government Solicitor.
Construction Cost: $186 million.
Construction Time:
Commenced - Late September, 1988 (start of tender period).
- Late December, 1988 (tender let).
- January 1989 (construction).
Completed - End June 1992 (including extensive integrated fitout).
Figure 8.4: Case Study 3
New Commonwealth Offices, Melbourne, Vic.
8.9.2 Project Description

(a) OBJECTIVES AND HISTORY

The New Commonwealth Offices project grew out of a need by the proprietor to accommodate some four thousand staff from several different departments, in one location. Such consolidation and centralisation, it was believed, would reduce maintenance costs and increase operational efficiencies. As was the case with the Telecom Corporate Headquarters project, the proprietor of this project was able to seek assistance outside of government circles for the delivery of the building. Although Australian Construction Services was used, the services of independent consultants and a private builder were also utilised.

The proprietor reportedly (P. Dempsey, personal communication, 8 August, 1991) wanted a delivery system which would have some of the benefits of a design/construct system such as single line responsibility, but with a higher degree of design control. A method of achieving greater design control was by the direct appointment of the design consultants. The proprietor wanted a delivery mechanism wherein the onus of co-ordination and responsibility was transferred from the proprietor to the builder thereby avoiding the need to deal with variations, extension of time claims and the like. The potential for such claims were thought to be further minimised by the requirement to implement a quality assurance programme. The proprietor also wanted a form of contract which could be used prior to the attainment of planning approval.

8.9.3 Management

The principal consultant, namely Hassell Pty Ltd, was initially appointed by the project manager. Subsequent sub-consultants were engaged and paid by the principal consultant. The initial design work was reportedly carried out by Australian Construction Services, but was developed by the principal consultant as appointed. During the tender stage, tenderers were
at liberty to explore alternatives for the supply of materials, goods and equipment. They were also able to investigate different structural systems to that proposed. The Conditions of Tender made provision for such alternatives (refer Item 8.9.4, this chapter).

The successful tender to this project elected to investigate the viability of an alternative structural system. The original system proposed was a totally reinforced concrete frame structure. The alternative put forward for approval was a steel frame structure with a reinforced concrete core. Under the conditions of tendering, tenderers were able to seek the advice of independent consultants, and this is exactly what happened with respect to the successful tenderer.

It was stated (P. Dempsey, personal communication, 8 August, 1991) that this particular tenderer approached an Adelaide-based firm of engineers, namely Dare Sutton Clarke Pty Ltd, to consider an alternative proposal. The alternative scheme proposed was subsequently checked, approved and adopted by the original engineering sub-consultants. The successful tenderer entered into a separate agreement with the second group of engineers, and paid them direct for their services. This agreement held no influence upon the terms and conditions of the original consultant’s agreement, nor did it affect that agreement in any manner. Under the primary consultant’s agreement, the appointment of the original consultants was protected. The proposal for a structural alternative reportedly (P. Dempsey, personal communication, 8 August, 1991) resulted in major negotiations taking place between what was to be the successful tenderer and the proprietor, prior to acceptance of the offer. Once the tender had been let, the consultants were novated to the builder, thereby releasing the proprietor of associated obligations, responsibilities and liabilities under the contract.

8.9.4 Contractual Documents

Analysis of contractual documents covers the most important or relevant issues thereof. Discussion is limited to the documents which were obtainable and/or released for research
purposes at the time of investigation into this Case Study.

(a) **CONDITIONS OF TENDERING**

The tender documents included the following:

(a) Conditions of Tender;
(b) Form of Tender;
(c) Conditions of Contract;
(d) Specification;
(e) Proprietor's Preliminary Working Drawings;
(f) Indicative Bill of Quantities;
(g) Project Brief; and
(h) Novation document.

Tenderers were required to prepare their offers on the basis of these documents. It was stated (Australian Government Solicitor, Conditions of Tender, Clause 2.1.1) that the proprietor:

...has finalised the architectural design of the building and has prepared the [Proprietor's] Preliminary Working Drawings and Specification which represent approximately 40% of the requirement. Floor plans and elevations have been decided. The successful tenderer will be required to finish the design and outstanding drawings necessary to construct the Works.

The construction requirements were based on a performance/quality basis. Particular emphasis was placed on floor loading requirements, acceptable deflections and long term performance. The facade was documented in terms of colour, finish, weathering, profile and general quality. Details concerning plant rooms, equipment and services installations was also supplied. This information was required to be incorporated in the documentation produced by the successful tenderer.
The tender conditions made reference to the novation requirement. Essentially, the principal consultant and sub-consultants, as specified, were required to be retained for the execution and completion of the documentation necessary on the project. The substitution of responsibilities was provided for (Australian Government Solicitor, Conditions of Tender, Clause 2.1.2) in this way:

Transfer of the Consultant and the Sub-Consultants from the [Proprietor] to the successful Tenderer will be made pursuant to the Novation in the form specified...The Novation will substitute the successful Tenderer for the [Proprietor] in the existing consultancy contract...

Under the Conditions of Tender, the proprietor was required to provide the successful tenderer with details of proposed tenancy fitouts. The builder was required to develop and document same suitable for individual tendering purposes. The builder then had to assess the offers, and subsequently became responsible for the letting of those sub-contracts.

The necessity of implementing a quality assurance programme, in accordance with Australian Standard AS 2990, was specified. The successful tenderer was required to provide a Quality Assurance Manual prior to the execution of the contract. There also existed a ‘schedule of exemptions’. These exemptions (Australian Government Solicitor, Conditions of Tender, Clause 2.1.6) recorded where the proprietor agreed that the:

...successful Tenderer can depart from the Project Brief, the [Proprietor’s] Preliminary Working Drawings and the Specification. It [also recorded] any items in the Schedule of Alternative Offers for Material, Plant and Equipment...

that the Proprietor accepted.

The Conditions of Tender specified the conditions applicable to responsibility for design. The successful tenderer became responsible for not only the design and documentation prepared post-novation, but also that prepared pre-novation. The builder was, however, excused of responsibility for the contents of the Brief and meeting the architectural planning requirements. The proprietor’s Preliminary Working Drawings and Specification met the
requirements of various government authorities. If the successful tenderer did not submit an alternative structural design proposal, then responsibility for the contents of that information would remain with the proprietor. If, however, the successful tenderer had submitted an alternative structural proposal, compliance with requirements would become that party's responsibility.

Conforming with the Conditions of Tender involved several matters. Some of these included a requirement for submission of two tender prices. The first was in the form of a '...lump sum subject to adjustment for rise and fall in costs' and the second was 'for a fixed lump sum not subject to any adjustment for rise and fall in costs' (Australian Government Solicitor, Conditions of Tender, Clause 2.2.1). Each tenderer was also required to nominate the time in weeks to execute the works to practical completion. In addition, tenderers were required to complete a 'Time and Performance Schedule' and a 'Delay Rate Schedule'.

If tenderers did elect to submit alternative structural design proposals, they also had to submit a report by an independent structural consulting engineer, giving an overview of the proposed structural design. In addition, they had to submit details of the primary structural members, including sizes and locations, footing details and tunnel protection (for underground rail facility below the site). Information had to show that service requirements including the air handling system, central service core, and the architectural appearance of the building would not change.

The tender documents included within them an Indicative Bill of Quantities. This particular document did not form part of the Conditions of Contract, and its contents were not guaranteed as correct by the proprietor. However, a Priced Indicative Bill of Quantities, as prepared by the builder and lodged with the proprietor did. The purpose of this latter document was to use its rates to value any proprietor's variations and to assist in the assessment of the value of work executed.
The tender offers were required to remain valid for a period of ninety days. This is somewhat greater than is usually the case in construction projects. Reasons for same were not evident in the documentation. Another peculiarity of this contract was the specific reference made to South Africa and Namibia:

The [Proprietor] except in exemption cases, may not enter into contractual relationships with parties in which either individual or corporate South African or Namibian persons in aggregate have a majority interest nor purchase supplies of South African or Namibian origin....Furthermore, the successful Tenderer will be required not to arrange sub-contracts with such companies.

There is little doubt that this requirement had a political basis and since the proprietor was the Commonwealth of Australia, the condition was imposed. At the same time (Australian Government Solicitor, Conditions of Tender, Clause 16):

It is Government policy to give preference to the use of goods, materials and associated services of Australian and New Zealand origin and the works have been designed and specified to enable use of such goods and materials.

In relation to industrial relations (Australian Government Solicitor, Conditions of Tender, Clause 21), it was specified that:

It is Government policy to award contracts only to Tenderer's who have demonstrated a good industrial record.

...a good industrial record shall be measured by adherence to the industrial code of conduct detailed in the Schedule of Undertaking of Compliance with Government Industrial Relations Policy...

Tenderers shall indicate their willingness to maintain a good industrial record by completing the Schedule of Undertaking of Compliance with Government Industrial Relations Policy.

Provisions such as this apply to several novation contracts, but are not found in standard forms. It may be argued that they meet the needs of today's building industry in Australia.

Like all tenders, the conditions associated with this one had a requirement for the each tenderer to inform themselves of all relevant aspects. This included careful examination of
the documentation as supplied by the proprietor; examination of the site and its surroundings; examination of all information relating to the risks and contingencies of the project; and personal satisfaction regarding the correctness of the tenderer's offer.

The Conditions of Tender had attached several Annexures which required completion by each respective tenderer. These are as listed below:

(a)  Annexure 1 - Schedule of South African or Namibian Beneficial Interest or Control;
(b)  Annexure 2 - Form of Tender (Lump Sum);
(c)  Annexure 3 - Schedule of Undertaking of Compliance with Government Industrial Relations Policy
(d)  Annexure 4 - Schedule of Alternative Offers for Material, Plant and Equipment;
(e)  Annexure 5 - Time and Performance Schedule Based on Tenderer's Practical Completion Time;
(f)  Annexure 6 - Delay Rate Schedule;
(g)  Annexure 7 - Schedule of Approved Imported Equipment and Material; and
(h)  Annexure 8 - Novation document.

(b)  CONSULTANTS AGREEMENT

In this case, the consultants agreement was called the 'Conditions of Contract for Consultant Services'. The agreement, like many contracts, provided for specific terms and conditions in relation to a variety of matters including service of documents and authority to give directions.

The consultant's obligations were limited by the fact that same was not '...for any purpose a servant or employee of the [Proprietor]' (Australian Government Solicitor, Conditions of Contract for Consultant Services, Clause 4). It was the proprietor's responsibility to provide the consultant with all legal, survey and other information concerning the site. The
proprietor's requirements also had to be defined including provision of details concerning the proprietor's programme and budget. If the consultant believed that the information as provided was inadequate for it intended purpose, then the superintendent had to furnish the consultant with additional information. In relation to progress, the consultant was required to submit written progress reports to the superintendent on a monthly basis.

The proprietor was able to appoint further professional consultants outside of this agreement. Such consultants were referred to as the 'superintendent's consultants', and could be called upon to offer independent advice on such matters as programming, quantity surveying, quality assurance and cost planning. The consultants covered by the consultant's agreement were not, however, responsible for the advice, service or performance of those additional consultants.

Variations could be ordered by the proprietor through the superintendent. In such instances, the consultants were paid an additional fee to cover the work as requested, and (Australian Government Solicitor, Conditions of Contract for Consultant Services, Clause 5):

| The [Proprietor] reserves the right, at any time, to alter, qualify or reject any design conclusion or recommendation made by the Consultant...provided that the [Proprietor] shall Indemnify the Consultant for any liability incurred by the Consultant because of such alteration, qualification or rejection. |

The agreement provided for termination. The three primary reasons for termination included by mutual agreement; by the consultant upon the expiry of a specified minimum time frame; or by the proprietor if the consultant failed to complete their obligations under the contract. Any fees due and payable to the consultant at the time of termination by the proprietor had to be paid by the proprietor. If the consultant instigated termination, then the proprietor would have to be reimbursed for any additional costs associated with the appointment of a new consultant required to complete the work.

Dispute resolution was provided for under the agreement. This took the form of the disputing
party notifying the other in writing. Once such notification had been received, the disputing party could elect to refer the matter to litigation or arbitration.

The consultant was required to take out professional indemnity insurance, an amount for which was duly specified. The nature of the condition was not dissimilar to those in other consultancy agreements. However, this agreement did make provision for limitation of action (Australian Government Solicitor, Conditions of Contract for Consultant Services, Clause 14.2):

Any action by the [Proprietor] against the Consultant must be commenced within 6 years of the date of completion of the Works.

The inclusion of a clause like this is of particular interest since it is not ordinarily found in professional consultancy agreements associated with the practice of architecture or related disciplines. State laws and Acts usually provide for unlimited time liability. Therefore, its express inclusion by the proprietor, namely the Commonwealth of Australia, could be seen as a precedent in the limitation of action debate - a debate which has been ongoing for many years, and as yet has not yielded any definitive resolutions.

Under the conditions of the contract, the principal consultant and sub-consultants were not required to perform any duties associated with supervision of work. The former was, however, required to assist in the evaluation of tenders. This included a review of all drawings, data sheets and other material as submitted by the tenderers. The consultant was also paid for any work carried out in relation to the evaluation of alternative design proposals.

The agreement defined the scope of work (Australian Government Solicitor, Conditions of Contract for Consultant Services, Clause 15.8) required from the consultant in respect of the following stages:
(a) Design Review - including review of all drawings, details, sketches prepared by or for the proprietor as part of the schematic design stage corresponding with the consultant's appointment;

(b) Design Development - including preparation of design development drawings for architectural, engineering and services components. Preparation of design reports and amendments to project Brief;

(c) Documentation (40% stage) - preparation of working drawings and details in plan, elevation, and section to facilitate tendering. This stage was equal to forty percent of total documentation.

(d) Documentation (100% stage) - completion of all drawings, details, specifications, schedules, computations. Represented sixty percent balance of documentation.

(e) Provisional sum works and completion of tenancy fitout drawings.

The agreement specified the terms and conditions applicable to the payment of the consultant's fees. It defined the amount payable together with the method of payment which was on a monthly basis.

The agreement also comprised several attachments. These included the following:

(a) Annexure 1 - List of consultants, including addresses.

(b) Annexure 2 - Scope of Services (including comprehensive and detailed information regarding the architectural, structural and services engineering services respectively encompassing design review, design development and documentation);

(c) Annexure 3 - Fees Payable;

(d) Annexure 4 - Provisional Sum Fit-out Works (including details of included and excluded items);

(e) Annexure 5 - Drawing Schedule (including a list of all architectural, structural and services drawings and their associated drawing numbers);
(f) Form of Formal Instrument of Agreement;
(g) Annexure 9 - Schedule of Unit Rates; and
(h) Annexure 10 - Formal Instrument of Agreement.

(c) DEED OF NOVATION

The Deed of Novation was effectively Annexure 8 of the Conditions of Tender. This deed was claimed to be supplementary to the consultancy agreement as defined. The successful tenderer accepted responsibility for matters relating to the works and the consultancy agreement, and agreed to perform relevant duties in accordance with the terms and conditions of that agreement. The principal consultant agreed to release the proprietor of any previous liabilities and obligations in relation to the original consultancy agreement. Post-novation, the application of the principal consultant's responsibilities, obligations and liabilities were transferred from the proprietor to the builder. The deed also provided for the rights of copyright to remain with the proprietor despite the builder's responsibility for design and documentation.

(d) BUILDING CONTRACT

The building contract used for this project was specifically written for the purpose. It was drafted by the Australian Government Solicitor, in liaison with the project manager, namely Australian Construction Services. Several drafts were prepared before the final form was accepted. Each draft was reportedly (B. Millar, personal communication, 8 August, 1991) distributed to the principal consultant and sub-consultants for their opinions, comments and advice. Whether all such advice and recommendations were incorporated is unknown. As was the situation in Case Study 1 of this chapter, this contract had a 'paramount' clause. It covered several items, one of which related to the objectives of the proprietor and the builder. These objectives included (Australian Government Solicitor, Conditions of Contract, Clause 1.2):
(a) Performance and execution of the works by the builder in accordance with the Brief and Existing Documents;

(b) Preparation by the builder of all further drawings, documents, details, calculations and other information necessary for the proper execution of the works; and

(c) Engagement of the consultant by the builder, assuming full responsibility for the design and construction of the works.

Upon entering into the contract, the builder accepted full responsibility for the design, documentation, construction and commissioning of the project. This included any liability associated with work carried out by the proprietor or the consultants prior to novation taking effect.

The Conditions of Contract called for the builder to provide security in accordance with the forms as defined. The lodgement of said security was strictly controlled by a time frame. Failure to meet the prescribed conditions, would have resulted in a fundamental breach of contract by the builder. If any interest was accrued on cash security, it was credited solely to the proprietor.

Provision was made in the contract whereby the builder was required to commence design and documentation work as soon as the contract was effected. The builder was also required to regularly, and at least monthly, provide the superintendent with copies of relevant information and documentation to evidence compliance with the requirements of the contract and the Brief. This process continued until each portion of the design and documentation was finalised. Any amendments or alterations directed were carried out.

The builder was required to indemnify the proprietor against any action, claims, liability, demands, suits, liens or damages arising out the work as prepared by the principal consultant and sub-consultants.
The builder was required to call tenders for the various sub-contract packages, had to assess the tenders received and submit details to the superintendent for perusal. The builder was responsible for ensuring that the offers eventually accepted complied with the requirements of the contract, and subsequently implementing the said sub-contracts. The Conditions of Contract, under Clause 10.5, made provision for bankruptcy of or default by a sub-contractor.

Once this contract was effected, the builder could only use the services of the principal consultant and associated sub-consultants as defined in the consultant’s agreement and deed of novation. Likewise, no changes could be made to the agreement without the written approval of the superintendent.

With regard to indemnity insurance and liability, the builder was required to ensure that the principal consultant and sub-consultants effected and maintained professional indemnity insurance commensurate with the terms and conditions of the contract and the consultant agreement. The builder was liable to the proprietor for any default, negligent act or other mistake performed by the consultant and sub-consultants as if they had been executed directly by the builder.

Insurance for protection of persons and property had to be effected by the builder, and relevant appropriate action had to be taken so as to minimise the risk of accident or injury. This included such things as the erection of guard rails, barricades and so on. The builder was also liable for the care of the works until the date of practical completion. Insurance cover had to be maintained after practical completion, but there were other conditions applicable in this instance. The builder was also required to insure the proprietor against property damage and public risk, including public liability, and accident or injury to employees. Insurance was required to cover the work of employees, selected sub-contractors, the principal consultant, and sub-consultants.
As is the case with some of the standard building contracts, this contract provided for the appointment of a superintendent. Any directions, approvals, instructions, demands, authorisations, determinations, rejections or the like made by the superintendent were deemed to have been made by the proprietor.

In this case, the builder was not granted possession of the entire site. Rather, the proprietor extended to the builder '...possession of sufficient of the site to able him to commence work...' (Australian Government Solicitor, Conditions of Contract, Clause 28.1). If the builder required extra area(s) of land to execute the works, then liability to pay any costs associated with it existed. Responsibility for provision of information for the purposes of setting out the works rested with the superintendent, but the actual setting out of the works was executed by the builder. Responsibility for accuracy of setting out remained with the builder unless faults, errors or omissions were found in the information as supplied by the superintendent.

The contract provided for the use of a 'project control programme'. This programme was as supplied by the builder immediately after the acceptance of the tender offer. After submission, the builder was required to adhere to the programme. Any deviation from it required the approval of the superintendent and had to be justified by the builder in terms of reasons for the deviation and any influence it would have on the overall programme. Certain circumstances did exist whereby the builder could claim extra costs. These included a deviation instructed by the superintendent; a deviation due to an act or omission by the proprietor; or several other reasons to which the builder was not a party, such as particular industrial disputes.

Issues associated with time for commencement, practical completion, and occupation of the works were addressed in Clause 35 of the Conditions of Contract. The proprietor could occupy any portion of the works that reached practical completion or, alternatively, which the superintendent had certified as fit for occupation. In the latter instance, the builder's rights
and obligations under the contract were not affected. Clause 35.4 dealt with extensions of time. Such extensions were not allowed unless there had been some form of breach of contract, default, or negligent act on the part of the proprietor. The clause also expressly stated that the builder could not claim an extension of time for ‘wet or inclement weather’. If an extension of time was granted by the superintendent, it had to be authorised before the project reached final completion. The contract also provided for liquidated damages to be payable to the proprietor by the builder.

The builder was required to supply the proprietor with a series of warranties in relation to the works. The builder had to warrant the following (Australian Government Solicitor, Conditions of Contract, Clause 38):

\[
\begin{align*}
(a) & \quad \text{the Works will be performed with due care and skill and shall be suitable for the purpose of a quality multi-storey office complex;} \\
(b) & \quad \text{the goods and materials supplied under the Contract will be of merchantable quality and will be reasonably fit for the purpose for which they are supplied; and} \\
(c) & \quad \text{the services supplied under the Contract will be rendered with due care and skill and conform to the purpose for which they are intended.}
\end{align*}
\]

The warranties required of the builder were all-encompassing in scope. The builder was responsible for every aspect of the works including design, documentation, construction and commissioning which complied with the original intentions of the contract.

Variations could only have been ordered by the superintendent. Reasons for ordering a variation included a requirement to increase, decrease or omit a part of the work; change the character or quality of the work or materials; change levels, lines, positions or dimensions of any part of the work; and/or execute additional work. Variations were valued in accordance with the Priced Indicative Bill of Quantities as prepared by the builder.

The issue of progress certificates, practical completion certificates and the final certificate were the responsibility of the superintendent. The superintendent would assess, value and certify claims as submitted by the builder, and would accordingly issue the relevant
certificate. The proprietor was then obliged to make payment on the basis of any certificates involving consideration. The effect of certificates varied. With respect to the issue of a certificate of practical completion, such issue did not constitute approval of the work as executed. However, the issue of the final certificate (Australian Government Solicitor, Conditions of Contract, Clause 42.5):

...[constituted] conclusive evidence that all work under the Contract has been finally and satisfactorily executed by the [Builder]...

Exceptions to the above approval included any fraudulent, dishonest or deliberate concealment by the builder or party for whom responsibility existed; any defects in the works which should reasonably have become apparent at the time of issue; or any accidental or erroneous inclusion or exclusion to the works. Notwithstanding the above exceptions, the builder's responsibilities and obligations were negated upon the issue of the final certificate.

The contract also provided for default or bankruptcy by the builder and procedures for dispute resolution. In respect of the latter, provisions were made for both parties to the contract. If the builder instigated a dispute, a submission had to be made in writing, providing details to the superintendent for decision (Australian Government Solicitor, Conditions of Contract, Clause 45.4(c)), and that '...decision shall be final and binding upon the [Builder] and the [Proprietor] unless either of them challenges it'. In the case of a challenge by either party, the matter would be referred to arbitration or a court of law. If the proprietor instigated the initial dispute, the matter would not be referred to the superintendent, but would instead go direct to arbitration or a court of law. Clause 46 set out the terms and conditions applicable to arbitration.

The contract also included several attachments. These are as listed below:

(a) Annexure 1 - (included specific details relevant to the contract, and copy of site plan);
(b) Annexure 2 - Rise and Fall (including conditions and labour index);
(c) Annexure 3 - Proprietor's Preliminary Working Drawings (including a list of all
drawings and associated numbers);
(d) Annexure 4 - Provisional Sums;
(e) Annexure 5 - Schedule of Unit Rates;
(f) Annexure 6 - Time and Performance Schedule;
(g) Annexure 7 - Delay Rate Schedule;
(h) Annexure 8 - Project Control Programme;
(i) Annexure 9 - Project Site Office (including details of facilities provided,
construction, services, security, loose furniture and equipment, and
layout plans);
(j) Annexure 10 - Schedule of Mandatory Design Requirements (in relation to the
design Brief and performance criteria);
(k) Annexure 11 - Schedule of Exemptions;
(l) Annexure 12 - Structural Design Check Certificate; and
(m) Annexure 13 - Consultants and Sub-consultants (list thereof).

8.9.5 Overview

During the course for research of this Case Study, interviews were undertaken with several
participants involved in the New Commonwealth Offices project. These included
representatives of the principal consultant and the builder. Communications to the sub-
consultants and superintendent requesting interviews were not answered. Discussion is,
therefore, limited to information as offered and relayed to the researcher by respective
interviewees.

Unlike the other Case Studies discussed in this chapter, this project was not considered
particularly successful. It was reported (B. Millar, personal communication, 8 August,
1991) that the contract was "not particularly good" since there were many clauses
contained in it which would allow the builder “to take [the principal consultant] to the cleaners”. This statement was not elaborated upon for reasons of confidentiality. One comment was made, however, relating to liability of the consultants. It was claimed (B. Millar, personal communication, 8 August, 1991) the builder made it expressly clear to the consultants involved that if a mistake was made which could be attributed to them, then the builder would not hesitate to make a claim against the consultant concerned. They were informed that they would be treated in the same manner as any other sub-contractor who had acted negligently or inappropriately.

The consultants involvement during the construction phase of the project was not provided for in the building contract. In this instance, the builder did enter into a separate agreement with the principal consultant during the construction stage. The consultant was required to advise on a variety of matters including quality of work executed and materials substitution. They were not, however, involved in variations or extension of time claims. If the consultants were required to make changes to documentation, the provision of services for which were outside of their original consultants agreement, they were duly paid extra fees.
**8.10 CASE STUDY 4: MCG GREAT SOUTHERN STAND REDEVELOPMENT, MELBOURNE, VIC.**

**8.10.1 Project Details**

- **Project:** MCG Great Southern Stand Redevelopment.
- **Address:** Yarra Park, Jolimont, Melbourne, Victoria.
- **Proprietor:** Melbourne Cricket Club.
- **End User:** Melbourne Cricket Club.
- **Architect:** Tompkins Shaw and Evans/Daryl Jackson Pty Ltd (Architects in Association).
- **Engineers:** Connell Wagner (Vic) Pty Ltd (Structural, Civil).
- **Landscape Architect:** Tract Consultants Australia Pty Ltd.
- **Quantity Surveyor:** W.T. Partnership.
- **Builder:** John Holland Constructions Pty Ltd.
- **Superintendent:** Gutteridge Haskins & Davey.
- **Cost Management:** W.T. Partnership.
- **MCG Project Manager:** D. Wilkinson.
- **Project Programming:** Paul Steinfort & Associates.
- **Legal Consultant:** Blake Dawson Waldron.
- **Construction Cost:** $120 million (construction only).
  $150 million (all inclusive cost).
- **Construction Time:** Commenced - September 1988 (project inception).
  January 1989 (project planning).
  November 1989 (put out to tender).
  April 1990 (tender let).
November 1990 (construction).
Completed - November 1991 (Stage 1 handover).
December 1991 (Stage 2 handover).

8.10.2 Project Description

(a) OBJECTIVES AND HISTORY

The Melbourne Cricket Ground (MCG) was first developed one hundred years ago. The Southern Stand was constructed in 1936-37. In 1988, the Melbourne Cricket Club and the Australian Football League (AFL) formed an agreement whereby the MCG would host the Australian Football League preliminary and grand finals for the next forty years. The AFL also agreed to house its corporate headquarters at the Ground. As a consequence of this agreement, a decision was made to redevelop the Southern Stand.

The development was essentially self-funded with revenue derived from a variety of sources including increased gate and catering earnings, rental from the AFL, corporate box leasing, and Melbourne Cricket Club membership subscriptions. It is anticipated that the new dining and viewing facilities will also generate returns since they can be hired out to the public during non-event periods (Australian Concrete Construction, October/November 1991).

The objectives of the proprietor (and subsequently the builder) were aesthetic based in many ways (Blake Dawson Waldron, Construction Contract - MCG Southern Stand Redevelopment, 1990):

It is the committed intention of the parties that the design of the new Southern Stand will reflect the prestige, history and cultural significance of the Site, produce a quality stadium utilising appropriate proven building systems and services being sympathetic and responsive to the architectural and cultural context of the Ground.
Figure 8.5: Case Study 4
MCG Great Southern Stand Redevelopment, Melbourne, Vic.
(b) DESIGN PARAMETERS

The reconstruction of the Southern Stand has provided spectators with much improved and many extra facilities. Spectator capacity is now forty eight thousand, and of these, forty one thousand can be seated while thirty seven thousand enjoy undercover facilities. There are also seventy three corporate boxes, administration facilities, seven restaurants, eleven bars and food outlets, and basement parking for two hundred and fifty cars (Constructional Review, May 1992):

*The new stand is seven stories high and 342m long, and occupies 45% of the circumference of the elliptical field. Seating is on a ground-level terrace and three upper galleries and is as close to the boundary as sightlines permit...The new stand creates a dramatic sense of enclosure, as in a modern coliseum, without any interruption to view from columns or downpipes...*

Various construction techniques and material choices were considered in the early stages of design. Eventually, it was decided to use a combination of reinforced concrete and steel. The main structure is concrete, but the tiered cantilevers and cantilever roof are steel. Construction time was also an important consideration (Constructional Review, May 1992):

*Speed of construction was essential to the enterprise in order to minimise disruption to the MCG’s sporting calendar, so the [builder] and the design team developed and refined a structural system which concentrated on the use of precast concrete elements and exploited the expertise of the local manufacturing industry. Precast elements were used extensively...*

The need for insitu concrete was reduced further by utilising a system of precast concrete panels for the floors. Due to the exposed nature of the Stand and need to 'hose down' areas, waterproofing became a major consideration in the design.

The overall construction time was minimised due to the use of precast and other prefabricated components. This allowed a vast number of components to be manufactured off site, thereby permitting the maximum number of units to be produced consecutively, and erection time minimised.
8.10.3 Management

From the early stages of the project's development, the project programmer, in conjunction with the MCC's project manager, worked closely with the architectural consultants, and the "...planning and project delivery strategy was seen as crucial to achieving a controlled project in this potentially sensitive site" (The Australian Project Manager, February/March, 1992). The project programmer reportedly (M. Betts, personal communication, 23 April, 1992) suggested the use of a novation system of project delivery and this recommendation was "readily accepted" by the proprietor.

The consultants were chosen on the basis of their ability, willingness to participate in a novation contract and their capability to perform the tasks that were required of them. One of the architectural consultants, namely Tompkins Shaw and Evans, had previously been consultants to the proprietor and thus continued their association in this instance.

A selected group of six or seven tenderers were issued with a set of the preliminary drawings, contract documents and time plans. Feedback was requested from the tenderers concerning their willingness to accept a novation system of delivery and contract, and suggestions regarding alternative solutions for aspects of the design. Amended documentation, prepared to approximately fifty per cent completion, was then forwarded to the tenderers. It is claimed (M. Betts, personal communication, 23 April 1992) that the architectural and structural drawings were well defined, and a significant amount of research had been undertaken with respect to constructability. The design Brief was also well defined at this stage, and co-existed with six volumes of detailed performance specifications and two volumes of indicative quantities (without a bill of quantities). The latter set of documents was used in a manner which assisted the tenderers in the preparation of their offers, but no reliance was placed upon them in the contract. A claim was made (The Australian Project Manager, February/March, 1992) that the:
It may be argued that this is an exceptional number of documents to be prepared for a project of this type, particularly considering that the design and documentation was reportedly only half complete when issued for tender. Questions may, therefore, be raised as to whether such a significant amount of documentation was actually prepared and, if so, whether it was considered necessary due to the nature of the project's design or because of the implementation of a novation system of delivery. Investigations have been unable to reveal the true reason since interviewees have been unable (or unwilling) to clarify the issue.

It may be argued that if correct, the documentation was produced for a combination of these reasons. That is, although the building typology was simple, the final design was complex due to the fact the building was elliptical and did not revolve around a constant radial point. This meant that precast units had to be individually cast thereby reducing the advantages of repetition in production. Also, at the time this project was developed, the novation system of contracting was still relatively unfamiliar to many of the participants involved. This could have generated a perception that it was of vital importance to "lock tenderers in" to a design and, in itself, would have ensured the success of the project thereby justifying the recommendation to use novation as a means of project delivery. The third reason could be attributed to the actual planning and programming process. Although there is little doubt that, in the long term, such planning and programming was critical and beneficial to the successful completion of the project, it may have increased the amount of documentation produced (necessary or otherwise) in the early stages of the project.

The project programmer assisted in the structure and development of the contract for the project. Once the contract was let (The Australian Project Manager, February/March, 1992), they had a role in "verifying the project plans and progress of the successful
[builder]...thus assuring the MCC of timely completion'.

After the contract had been let and novation taken effect, the builder gained and maintained control over the project. This included matters relating to design, documentation, construction and commissioning.

8.10.4 Contractual Documents

Analysis of contractual documents covers the most important or relevant issues thereof. Discussion is limited to the documents which were obtainable and/or released for research purposes at the time of investigation into this Case Study.

(a) CONSULTANTS AGREEMENT

For reasons of confidentiality, this document was not released for research purposes

(b) DEED OF NOVATION

For reasons of confidentiality, this document was not released for research purposes

(c) DESIGN BRIEF

Although, for reasons of confidentiality, the complete document was not released for research purposes, a list of its contents was provided. These (MCC Southern Stand Redevelopment, Design Brief Contents, 31 July, 1989) provide an insight into the issues and matters which were considered important and requiring of definition and compliance. They have accordingly been listed as follows:
PART 1

(a) Introduction (including background, project objectives, authorities, development issues report, influencing factors, olympics, and summary outline building Brief);

(b) The Site (including location, public authority, and soil report);

(c) Project Description (including overview, staging, layout and facilities, access, basic structure, demolition of the old stand, and working hours);

(d) Operational Factors (stadium events);

(e) Environmental Factors (including wind analysis, shadows, flooding, and vehicular traffic); and

(f) Demolition of Existing Southern Stand (including asbestos removal, staged demolition, temporary services, and adjacent buildings).

PART 2

(g) The Building (including usage, regulations, structure, electrical and mechanical services, lighting, lifts, communications, security, fire protection services, hydrants and hose reels, domestic hot and cold water, sewerage, agricultural drains, stormwater and tier drainage, finishes, and seating sight lines); and

(h) Fitout (including boxes, offices, concessions, and restaurants).

PART 3

(i) Spectator Access;

(j) Team Facilities;

(k) Disabled Persons Facilities;

(l) Police Facilities;

(m) Emergency/Disaster Procedure;

(n) Sanitary Facilities (including toilets and rubbish removal/cleaning);

(o) Catering;

(p) Landscaping;

(q) Vehicle Access - carparking; and
(r) Fire Protection.

(d) BUILDING CONTRACT

The building contract employed for this project comprised two major parts: the Special Conditions of Contract and the General Conditions of Contract. This contract was drafted by the legal consultant in liaison with the project programmer and other consultants. The standard AS 2124 form of building contract was used as a basis for the formulation of this document, but was considerably amended to suit.

It was the intention (M. Betts, personal communication, 23 April, 1992) that the Special Conditions 'overrode' certain clauses in the AS 2124 form. This was seen as necessary for various reasons, one of which concerned the requirement for programming of the works, including "milestone dates". The Special Conditions were broadly divided into six categories. These included design, warranty, programme obligations, industrial relations, as constructed drawings and occupation prior to practical completion.

As is the case with other novation contracts, this one states that the proprietor engaged the consultants prior to the execution of the deeds of novation by the builder. Upon novation, the consultants were engaged by the builder. At the same point in time, the builder accepted responsibility for the execution and completion of '...all design, design development, detailed design work and documentation necessary for the proper execution and completion of the Works...' (Blake Dawson Waldron, Construction Contract, Special Conditions, Clause 1.1, 1990). This obligation was extended to read:

In particular but without limitation, the [Builder] shall ensure that the design of the Works will be carried out to the appropriate standards of design, for the Contract Sum in accordance with the Design Documentation Programme and the Construction Programme and the Design Brief, and the intent of the Drawings and Specifications ...and that the design of the Works will reflect the prestige, history and cultural significance of the Site, produce a quality stadium utilising appropriate proven building systems and services whilst being sympathetic and responsive to the architectural and cultural context of the Ground. The [Builder] agrees that the
This clause also called upon the builder not to modify or alter the conceptual design. The builder was restricted from making any changes to or terminating the consultants agreements, without the written approval of the proprietor. The builder had certain further design obligations, including the preparation of any additional drawings and specifications as would have been necessary to complete the design and documentation for the project. Such documentation had to be '...prepared with the care and skill to be expected from experienced professionals with the requisite qualifications' (Blake Dawson Waldron, Construction Contract, Special Conditions, Clause 1.2(b)(v), 1990). If the superintendent did not approve this additional documentation, or if further information or a design consultants' report was requested, the builder was obliged to provide them. Likewise, the builder was required to notify the superintendent of any changes to the works which may have been of benefit to the proprietor, and recommend any reviews, revisions or updates considered necessary. The design and documentation produced had to comply with all relevant laws, regulations and other requirements. Although the builder undertook to accept and complete all design and documentation work for the project, all rights to copyright remained with the proprietor.

The builder also had obligations with respect to design development, and co-ordination and management of the design consultants. In order to execute design development, the builder had to establish a project team comprising the following functional members, all of whom were required to hold appropriate experience and qualifications commensurate with their role (Blake Dawson Waldron, Construction Contract, Special Conditions, Clause 1.3(c), 1990):

\[(i) \quad \text{Design Group;}
(ii) \quad \text{Planning and Scheduling Group;}
(iii) \quad \text{Procurement Group;}
(iv) \quad \text{Construction Group; and}
(v) \quad \text{Industrial Relations Group.}\]
The builder had to provide a 'project co-ordinator' whose duty it was to co-ordinate and facilitate communication between the superintendent and the design consultants. The proprietor and superintendent did not, however, have any obligation nor responsibility (Blake Dawson Waldron, Construction Contract, Special Conditions, Clause 1.3(g)(i), 1990) to:

...manage, approve, authorize or direct the Design Consultants or the [Builder] in the performance by them of their obligations in connection with the design, design development or documentation of the Works...

Inherent in the design development stage was a requirement, on the part of the builder, to submit documentation to and obtain approval from the relevant regulatory bodies and statutory authorities having jurisdiction over the project.

Alongside the design obligations held by the builder were certain programme obligations. Essentially, the 'preliminary project programme' submitted by the builder at tender formed '...the basis of a contractual time control document' (Blake Dawson Waldron, Construction Contract, Special Conditions, Clause 3.1, 1990). The resultant construction programme consisted of a time scaled bar chart and supporting network analysis, all of which had to conform with the preliminary project programme. The bar chart and network analysis contained a critical path analysis, specification trade breakdown, design and construction activities details, documentation production time frame, details of all steps necessary for staged occupation of the works, and details of features of significant influence upon execution of the works.

The builder had an obligation to complete the works by no later than the agreed date for practical completion of the parts associated with staged handover and the whole. Clause 3.3 of the Special Conditions provided for acceleration through operation of the contract. This was a clause of particular interest since it made the following provisions:
If the achievement of the following major activities has not occurred on the following milestone dates and/or Dates for Practical Completion of the Works (or separable portions thereof)...the [Builder] shall be bound to accelerate the Works at no additional cost to the [Proprietor] by the provision of additional resources in order to ensure conformity with the next relevant milestone date or relevant Date for Practical Completion.

This effectively meant that if the builder was experiencing delays due to personal mismanagement, costs for rectification work could not be claimed. The inclusion of this specific clause sets this contract apart from other novation contracts. The difference lies not with the requirement of delay rectification, which may be inherent with other contracts, but rather with the express terms and conditions associated with it.

As a part of the builder's obligations for time programming, there existed a requirement that a series of reports be produced. These included 'work force reports', 'programme status reports' and 'programme revision'. Work force reports indicated site personnel levels recorded on a weekly basis including proposed personnel required for completion of the works, and work force records regarding such things as sickness, absenteeism, accidents, industrial relations actions, and inclement weather recorded on a trade and daily basis. Programme status reports recorded critical path activity, time elapsed and remaining, and lost time on a monthly basis. Programme revision was carried out monthly, and included details of any changes to the scope of the works, changes in the builder's sequencing of activities, programme acceleration activities and any extensions of time.

The builder had certain obligations under the contract in reference to industrial relations issues. Essentially, the builder acknowledged and agreed that the contract sum included an allowance for the risk associated with any matters arising at the site or the works. This included (Blake Dawson Waldron, Construction Contract, Special Conditions, Clause 4.1, 1990):

...without limitation, demarcation disputes, increases in labour costs and site allowances, any reduction in construction industry working hours per week, demonstrations or labour disputation, special allowances or compensation or any reduction in labour or hours worked on the Works.
Likewise, the builder was required to implement the Victorian Building and Construction Industry Code of Conduct in relation to the management of industrial relations. In so doing, the builder undertook to maintain a good industrial record and ensured that adherence (including by sub-contractors) to certain conditions was achieved. These included (Blake Dawson Waldron, Construction Contract, Special Conditions, Clause 4.2, 1990):

(a) Awards and formal agreements;
(b) National Wage Case Principals;
(c) Prohibition of "cash" payments;
(d) Implementation of good safety practices;
(e) Refusal of claims for payment for lost time due to industrial action; and
(f) Agreement to refuse to deal with the Builders Labourers Federation where it did not have coverage for work.

Some other novation contracts also provide for industrial relations matters, but this particular contract appears to have more comprehensive terms and conditions. It may be considered an attempt to identify issues of possible dispute or conflict thereby minimising or negating potential claims.

The Special Conditions also provided for the builder to supply the proprietor with copies of all relevant as-constructed drawings prior to practical completion coming into effect. With regard to practical completion, the Conditions also made provision for occupation prior to practical completion. However, the actual terms and conditions associated with it were not particularly explicit and, therefore, had the potential to bring about a claim because of such ambiguity. The General Conditions of Contract, although based on the AS 2124 standard form of contract, have been written for specific use on this project.

In this instance, the builder's security was in the form of a cash retention, but an option existed whereby additional security could have been provided in some other form acceptable
to the proprietor. Any interest accrued on retention moneys or other cash security was credited to the proprietor.

Clause 7.6 of the General Conditions provided for disclosure of information relating to design, documentation, or other contractual documents and records for matters of a confidential nature. Likewise, media releases were prevented without the prior consent of the proprietor.

As is the case in most novation contracts, the builder could not claim for site or latent conditions, since it was a condition of the contract that the builder became familiar with all aspects of the site.

Clause 12 of the General Conditions called for the builder to ensure the protection of people and property during the execution of the works. Under this provision, the builder also had to cater for instances when access was required for the public or other nominated persons.

Insurances to be effected by the builder were quite comprehensive. They included insurance of the works, damage to persons and property other than the works, public liability insurance, and insurance of employees. It is not uncommon for novation contracts to call for professional indemnity insurance. In this instance the builder was not required to take out personal cover, but was required to ensure that the design consultants effected and maintained their own professional indemnity insurance. Proof of all insurances effected had to be provided to the proprietor by the builder before the commencement of work (including design work) and prior to the payment of the first progress payment.

The proprietor was responsible for the appointment of the superintendent. The role of the superintendent was defined in this way (Blake Dawson Waldron, Construction Contract, General Conditions, Clause 19, 1990):
The [Builder] acknowledges and agrees that, otherwise than when the terms of the Contract require the Superintendent to act as an independent certifier, valuer and assessor, the Superintendent shall act as the representative of the [Proprietor].

In this case, possession of the site was defined, not only in written terms, but also by way of the provision of a 'marked up' map. Illustrated were the portions of the site which were to be made available, and in addition to this, the clause provided for the superintendent having the discretion to make available extra portions of the site if the need arose. The setting out of the works was the responsibility of the builder, but the superintendent was required to supply the builder with all the necessary information. If the information, as provided by the superintendent, contained any errors or omissions the builder was able, under Clause 24.3, to claim costs.

Since the contract provided for separate stages of handover, conditions applied to the individual dates for practical completion. Likewise, conditions existed which permitted the use of partly completed works. Extensions of time were not usually entertained, however, conditions which did allow for same included any act of prevention by the proprietor or superintendent (Blake Dawson Waldron, Construction Contract, General Conditions, Clause 31.5A(b), 1990) or:

...any strike (not arising from an act or omission of the [Builder]...) in respect of any national issue directly affecting the Site (where such national issue also results in delays to projects in at least three States of Australia including Victoria) or by virtue of...a negligent act of the [Proprietor] or the Superintendent.

Valuation of variations (as permitted) and progress claims was normally the responsibility of the superintendent. Likewise, the issuing of certificates was carried out by same. The certification role of the superintendent was extended to include responsibility for the issue of certificates of practical completion and final payment.

Issues relating to default or insolvency were covered by Clause 40 of the General Conditions. Default by the builder for a substantial breach of contract could result in the proprietor
terminating the agreement. Such 'substantial breaches' included (Blake Dawson Waldron, Construction Contract, General Conditions, Clause 40.2, 1990):

(a) Suspension of work;
(b) Failing to proceed expeditiously and without delay;
(c) Failing to comply with the standards of workmanship under the contract;
(d) Failing to comply with the superintendent's directions;
(e) Failing to provide evidence of insurance;
(f) Failing to obtain necessary statutory approvals;
(g) Failing to protect people and property;
(h) Failing to execute the design;
(i) Terminating without approval, or breaching or failing to remedy a consultant's agreement; and
(j) Failing to observe the terms of all Special Conditions.

The builder also had a right to terminate the agreement if the proprietor made a substantial breach of contract (Blake Dawson Waldron, Construction Contract, General Conditions, Clause 40.7, 1990), for reasons such as:

(a) Failing to make a payment;
(b) Failure by the superintendent to issue a certificate of practical completion; and
(c) Failure to give the builder possession of sufficient of the site within a specified time frame.

In this case, the methods of dispute resolution were somewhat different to other novation contracts. There were really only two courses of action. The first involved reference of details of the dispute to the superintendent. Failing an answer, or an acceptable resolution, the disputing party's next course of action was to pursue litigation proceedings via the Courts of the State of Victoria. It may be argued that this is a rather restrictive, and
potentially expensive, way of dealing with dispute resolution. An alternative point of view would argue that this would act as a deterrent to claims instigation.

8.10.5 Overview

During the course of research of this Case Study, interviews were had with several participants involved in the MCG Southern Stand Redevelopment project. These included representatives of the project programmer and legal consultants. Communications to the builder and other consultants requesting interviews were not answered. Discussion is, therefore, limited to information as offered and relayed to the researcher by respective interviewees.

It is claimed (M. Betts, personal communication, 23 April, 1992) that the project “was a success”. A major factor of the project’s success was attributed to the builder's ability to control the design development, documentation and construction phases. The builder reportedly did run over time during the course of the project, however, same was eventually completed on time, in respect of the overall programme, and within budget. The existence of the programme clauses in the contract reputedly assisted in ensuring that the builder did remain on schedule. It was reported (M. Betts, personal communication, 23 April, 1992) that the project programmer also incorporated an anticipated “delay factor” in the overall programme. This was in the order of twenty percent extra, and covered such things as rain, access and other aspects associated with the central business district of Melbourne. The meeting of the separate handover dates was of crucial importance to the proprietor and the builder. These dates had to be met since the proprietor was not willing to jeopardise the fulfilling of agreements to host particular sporting events such as, for example, the World Cup Cricket. It was, in fact, events such as these which determined the completion dates from the outset.

There was reportedly (M. Betts, personal communication, 23 April, 1992) no formal
quality assurance programme implemented on this project. However, the builder did implement a programme during the construction phase. One area which was of considerable importance to the builder was the manufacture of the precast concrete panels. Since the panels were obtained from six or seven different sources, continuity and maintenance of quality standards became paramount to the project's success. It also ensured that the builder would not have to meet the costs of replacing inconsistent or sub-standard units.

At the same time, such diversification of product source meant that strategic independence was obtained and the potential for industrial unrest minimised. That is, by organising the supply of the precast units from several sources, there was less likelihood of the manufacture of the units being stopped or delayed due to industrial action against one supplier. The multi-source strategy also led to an increased amount of effective time available during construction. In addition, flexibility of on-site work was attained. There was reportedly (J. Curtis, personal communication, 24 April, 1992) "no union trouble" on this project since, at the time, "industrial disputes and action was concentrated on a project in St. Kilda Road". The builder on that particular project was Leighton Contractors Pty Ltd. It may be proposed that this is the same circumstance which existed on the Adelaide Entertainment Centre project (refer Case Study 1, this chapter).

No quality assurance programme existed during the design phase, however, the builder did request that the consultants involved in the project submit a letter stating compliance of each aspect of the project with the contract, drawings, specifications and other documents. It may be argued that this created an 'insurance policy' for the builder, in the case of latent defects. Such action by the consultants might also be interpreted as indirect 'certification' of work. However, this could not be tested unless a claim arises in the future (since none has eventuated to date).

Refer Figure 8.6 overleaf (The Australian Project Manager, February/March, 1992) for an overview of the planning and implementation processes involved in the project.
Figure 8.6: MCG - Planning and Implementation Process
8.11 CASE STUDY 5: AUSTRALIAN DEPARTMENT OF DEFENCE

The four preceding Case Studies have examined aspects of actual project developments. This Case Study will not be dealing with a particular project, but rather a 'standard' form of novation contract, as prepared for use by the Australian Department of Defence. The contract is known as 'Document and Construct' and for an overview refer to Chapter 7.

The General Conditions of Contract are structured in a way similar to other novation contracts. Under the definitions (Defence Standard Conditions of Contract, Document & Construct, Clause 2.1, 1992) the consultant and project manager are respectively defined in this way:

"Consultants" means those consultants which were engaged by the [Proprietor] for the purpose of preparing the Outline Design...

and

"Project Manager" means the person named...as the Project Manager or other such person from time to time appointed in writing by the [Proprietor]...

This contract provides for the inclusion of a project manager. The project manager is delegated with many of the roles and responsibilities commonly assigned to a superintendent in other forms of novation contract.

The nature of the agreement is defined in terms of one of two alternatives, namely 'Alternative 1' and 'Alternative 2' respectively. The first alternative involves a contract sum which is not subject to rise and fall conditions, while the second is subject to it. The builder's obligation under the contract is explicit and all-encompassing (Defence Standard Conditions of Contract, Document & Construct, Clause 3.2, 1992):

The [Builder] shall be solely responsible for the Works in accordance with the provisions of this Contract and acknowledges that the [Proprietor] is relying upon the advice, skill and judgement of the [Builder] in the design and construction of the Works and the facilities to be provided therein including but not limited to the choice of materials and plant to be incorporated therein.
The builder warrants that the outline design has been checked and satisfaction exists as to adequacy for use; that the design and construction of the works will be completed in accordance with the contract; and that once constructed, the works will be fit and adequate for the purpose for which they were intended. Under Clause 3.5, the builder agrees to enter into a consultants agreement, post-novation; obtain, comply with and observe all relevant regulations, approval conditions and so on; and to bear total risk and responsibility for any defects that may be attributable to the outline design or any other design work carried out prior to novation being effected.

The form of security to be provided by the builder can take several forms. It may be a cash security, government bond, inscribed stock or bank guarantee. Retention money may be retained in lieu of such security. Any interest earned on cash security or retention money is retained solely by the proprietor.

Mention has already been made of the builder’s responsibility to complete design and documentation work once his offer has been accepted. Such work as prepared requires the approval of the project manager before any work associated with it is executed. If the project manager fails to respond to such a submission, within a specified period of time, the documents are deemed to be approved. The onus, therefore, is placed upon the project manager to ensure that approvals (or rejections) are given promptly. The builder is also required to submit a ‘documentation programme’ to the project manager. This programme forms a part of the overall construction programme.

The builder is not able to indiscriminately vary the works (Defence Standard Conditions of Contract, Document & Construct, Clause 8.6, 1992):

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The [Builder] shall carry out and complete the Works strictly in accordance with the Drawings and Specifications.

The [Builder] shall not depart from the Drawings and Specifications in any respect without the prior written consent of the Project Manager, such consent not to be unreasonably withheld where the departure does not materially affect the Works. If
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the [Builder]...considers it necessary or desirable to vary Drawings and Specifications in any way, the [Builder] may by notice in writing to the Project Manager seek the Project Manager's approval to vary [same].

Like many other novation contracts, copyright of all design and documentation prepared remains vested in the proprietor, despite the fact that the builder becomes responsible for the execution and delivery of these aspects.

In this particular contract, the deed of novation is known as a 'Consultants Deed of Covenant'. It serves the same purpose as a deed of novation and takes the same general format and structure. The agreement has to be executed within one week of acceptance of the successful tenderer's offer, and failure to accept it or the conditions which apply thereto, constitutes a fundamental breach of contract by the builder.

Under Clause 11.2 of the General Conditions, any site or sub-surface information supplied to the builder by the proprietor, the project manager or their respective consultants does not form part of the contract. In relation to the site conditions, the builder warrants that certain tasks have been done. These include the following (Defence Standard Conditions of Contract, Document & Construct, Clause 12.1, 1992):

(a) Examination of the Outline Design, Conditions of Tendering, General Conditions of Contract, and any Special Conditions of Contract if applicable;
(b) Examination of all information relevant to the risks, contingencies and other circumstances which may affect the project;
(c) Visit to and examination of the site and its surroundings to enable full and comprehensive familiarisation of the conditions;
(d) Informed oneself completely of the nature of the work and materials, means of access and transport facilities;
(e) Informed oneself as to the availability and cost of labour;
(f) Satisfied oneself as to the correctness and sufficiency of the applicable tender;
(g) Informed oneself of all regulatory and statutory requirements applicable to the project;
(h) Obtained all appropriate professional and technical advice on all matters listed above.

Clause 16.1 of the General Conditions provides for the builder's responsibility with regard to the care of the works. The builder is liable for same until midnight of the date for practical completion. By specifying an actual time, this particular clause differentiates this contract from other novation contracts. That is, other contracts do not normally specify an expiry time. The inclusion of such a clause defines the specific time at which risk will be transferred and, in so doing, eliminates the potential for a dispute based on the interpretation of expiry. After the date of practical completion, but before the final completion date, the builder still has to maintain some insurance of the works. This insurance, however, deals with aspects of the builder's default including faulty design, workmanship or materials, and covers the proprietor against any loss or damage to the works as a result thereof. The builder is also required to effect other insurances common to other novation and standard building contracts. These include public liability, property damage and public risk, accident or injury to employees, and insurance of employees.

Under this contract, the builder is required to effect his own professional indemnity insurance (Defence Standard Conditions of Contract, Document & Construct, Clause 17.2, 1992):

...in connection with the professional activities and duties of the [Builder] as a designer of the Works and as the party responsible for the construction of the Works.

Although this type of clause does exist in some other novation contracts, it is interesting to note that the professional indemnity requirement has been extended to include the actual construction of the project. This is unusual in Australian building contracts, and if the use of this particular contract does become widespread (which reportedly is a desire of the Department of Defence), then its inclusion in other contracts may result. This would have
obvious benefits for the client as a means of ensuring quality in building, but builders themselves may not be so willing to accept the condition. They would, undoubtedly claim that it would mean an increased cost on every project which, to a degree, is correct. However, it may be argued that the issue of greatest concern is one relating to ‘track record’. That is, if a builder has a good or satisfactory operational history then insurance cover is likely to be granted, however, if the builder is not a successful operator, insurance may be denied or premiums levied at excessive levels to cover the potential risk. By asking for professional indemnity insurance, the proprietor is also expecting to be provided with a ‘professional service’. Some builders may not be able nor willing to provide such a service.

Failure by the proprietor to give the builder possession of the site by the agreed date, does not result in a breach of contract, however, it can constitute a valid reason for an extension of time claim. As is the case with some other novation contracts, this one provides for the builder to gain possession of as much of the site as is necessary to begin and complete the works. If the builder requires additional space, then procurement shall be organised by the builder at personal cost. In association with the site is the builder’s responsibility to accurately set out the works. Failure to do so may result in the builder having to rectify any mistakes at personal cost.

Clause 31.8 of the General Conditions provides for the implementation by the builder of a quality assurance system. The system employed has to meet with the approval of the project manager.

The rate of progress is addressed (Defence Standard Conditions of Contract, Document & Construct, Clause 34.1, 1992) thus:

The [Builder] shall proceed with the work under the Contract at a rate of progress and in a manner satisfactory to the Project Manager.

Although this clause makes reference to the rate of progress it does little to define acceptable
standards. Likewise, it does not refer to another clause or schedule specifying compliance of completion, in part or whole, with ‘key dates’ (refer Case Study 4). The definition of ‘rate of progress’ becomes rather ambiguous in this instance, and has the potential to lead to a dispute. Provisions for extensions of time claims are restrictive, and not dissimilar to other novation contracts. This matter is dealt with under Clauses 35.4 and 35.5 of the General Conditions. The builder will only be entitled to an extension of time if the delay causing the claim was not attributable to that party. Reasons include any breach by the project manager or proprietor; execution of a variation ordered by the project manager; and/or a latent condition. The builder also has to comply with certain conditions including the reasonable instructions of the project manager; the taking of proper steps to minimise or eliminate the occurrence of a delay; and a demonstration to the project manager that a delay in achieving practical completion has actually occurred.

Liquidated damages apply to the builder if failure to reach practical completion by the specified date occurs. If, however, the builder manages to reach practical completion before the specified due date, an entitlement to a monetary bonus may exist (Defence Standard Conditions of Contract, Document & Construct, Clause 35.10, 1992):

If the Date of Practical Completion is before the date set out...the [Proprietor] shall pay to the [Builder] by way of a bonus, and in addition to the Contract Sum, an amount calculated...for each day prior to the date set out...for which the Works have been brought to Practical Completion.

The above clause is expressly nominated as being optional. It may be argued that its inclusion would provide a very real incentive to the builder to complete the works before the nominated due date. The builder still needs to be attentive to all personal obligations under the contract, not least of which involves the delivery of the project to the quality as defined.

The circumstances under which a variation is allowed are the same as those which applied in Case Study 3 of this chapter. Valuation of variations is by way of a ‘Schedule of Prices’. Clause 40 of the General Conditions covers variations, however, mention thereto is also made
in Clause 30.4. Under this latter clause, the project manager may order a variation if that participant ‘...discovers materials or work which is not in accordance with the Contract...’.

It is the project manager’s responsibility to assess the value of progress claims, as submitted by the builder, and issue certificates accordingly. The existence in the contract of two alternatives, namely Alternative 1 and Alternative 2, affects the conditions applicable to the issue of progress certificates. In the first alternative, the builder must lodge progress claims on a monthly basis. These claims must show the contract value of the work, a summary of all claims made by the builder, and documentary evidence that all subcontractors have been paid up to date. The progress certificate subsequently shows the amount of the progress payment less any retention moneys, any progress payment already made in respect of the claim, and any other money that may be deductible by the proprietor.

The second alternative involves the builder submitting progress claims at predetermined stages of the project. The builder must provide the project manager with a written claim stating that the relevant stage has been completed together with an attributed value for the work. The same conditions of payment apply to this alternative as to the first.

It is stated, under Clause 42.7, that the effect of the progress certificate or certificate of practical completion does not constitute approval of any work executed. However, unlike other novation contracts, this one does not state the effect of the final certificate.

The provisions for settlement of disputes under this contract varies from others. If a dispute arises between the proprietor and the builder, or the proprietor or the builder and the project manager, the matter is referred to an ‘Adjudicator’ for decision. The adjudicator is nominated by the builder or, failing this, by the project manager within one week of acceptance of the tender offer. The procedures covering referral of a dispute to the adjudicator are comprehensive and covered under Clause 45 of the General Conditions, and the important distinction to note is that in ‘...making his decision the Adjudicator shall act as an expert and not as an Arbitrator’. Dissatisfaction by either party with the adjudicator’s
decision can lead to the matter then being referred to arbitration or, alternatively, litigation.

The contract has an industrial relations clause, namely Clause 50. It covers issues relating to an industrial relations policy and industrial disputes. The builder is required to establish, maintain and administer an industrial relations policy for the site. Under this policy, the builder must ensure that all persons engaged or employed, including sub-contractors and/or suppliers abide by the relevant awards and conditions applicable to the execution of the works. The builder is also required to take all necessary action to avoid industrial disputes arising which could affect the execution of the works. If any industrial disputes do arise, the builder must provide the project manager with details of them.

Clause 50.5 deals with tendering ethics. The inclusion of such a provision appears to be unique to this particular contract. It is interesting that it is included in the General Conditions of Contract as opposed to the relevant Tendering Conditions, and the content of the clause appears to recognise the fact that unethical tendering practices do occur. The builder has to warrant communication was not entered into in any way with any of the other tenderers during the tendering process. In addition (Defence Standard Conditions of Contract, Document & Construct, Clause 50.5, 1992), the builder:

...warrants that it did not engage in any discussion or correspondence with such persons concerning the sum of money it was going to tender as its tender sum, that it did not engage in any collusive tendering with any of the other tenderers and that it did not engage in any conduct or have any arrangement or arrive at any understanding with any of the other tenderers which in any way was or could have the effect of reducing the competitiveness of the tender process for the Works and thereby increasing the Contract Sum.

The origins of this clause are unclear, but it may be possible that its inclusion was related to the findings of the Royal Commission into Productivity in the Building Industry in New South Wales (refer Chapter 6, Item 6.1.3(b)).

One of the final clauses in the contract deals with non-reliance of the builder upon
information, statement, representation or documentation provided by the proprietor or any of that party's representatives or consultants. This provision is not uncommon in novation contracts, however, the terms are express in nature (Defence Standard Conditions of Contract, Document & Construct, Clause 54, 1992):

In this regard the [Builder] warrants that it enters into this Contract based on its own investigations, interpretations, deductions, information and determinations and the [Builder] acknowledges that it is aware that the [Proprietor] has entered into the Contract relying upon this warranty.

This clause effectively means that the builder has no cause for recourse in the event that inadequate or incorrect information was provided to that party, or if interpretations, assumptions or deductions made were inappropriate or inapplicable.

The contract also has several attachments as listed below:

(a) Annexure 1 - (includes details relating to the specific project);
(b) Annexure 2 - Consultants Deed of Covenant;
(c) Annexure 3 - Insurers Deed;
(d) Annexure 4 - Sub-contractor Deed of Covenant (including an appendix and schedules);
(e) Annexure 5 - Unconditional Undertaking; and
(f) Annexure 6 - Form of Warranty.

8.12 SUMMARY

The novation system of project delivery is gaining acceptance within the Australian building industry. Its successful implementation on a variety of recent major projects has led to the positive promotion of its benefits.
It may be argued, however, that the success of these projects cannot be credited exclusively to the novation system, nor the contracts developed to implement same, but rather to a combination of these and other factors. There is little doubt that the system has its advantages, however, these should be considered in light of other influences such as economic and industrial climate, current political policies, and social and building industry attitudes.

There are certain provisions in most novation contracts which appear to have resulted as a response to building industry needs. These include conditions relating to industrial relations, copyright, quality assurance and professional indemnity insurance for builders providing design and documentation services.

The enforceability or otherwise of the contracts developed cannot and will not be determined until a dispute arises and the documents, including the intentions associated with them, can be tested in a court of law. This applies to any and all contracts, irrespective of differences which may exist between them. The fact that these contracts have not yet been tested in a court of law, may mean that they are indeed successful in allocating risk and bringing about acceptance of that risk by the builder. Alternatively, it may bear testimony to the increasing reluctance of the parties concerned to enter into lengthy and expensive litigation proceedings. Participants in the Australian building industry are becoming aware that the cost of legal action may far exceed the value of the dispute originally raised or contested.
Chapter 9: QUALITY ASSURANCE

This chapter investigates the principles of quality assurance programmes within the Australian building industry. Consideration is given to the reasons for implementing such a programme, and the consequences thereof for the relevant participants, but discussion remains relatively general in nature and content.

9.1 DEFINITION

'Quality assurance' may be defined as (F. Travis, South Australian Builder, March 1992):

"...the assurance that a producer can give, that the products, or services being provided are fit for the purpose for which they were intended and that this conformance will occur every time.

It means that what the customer gets tomorrow will be exactly the same...quality that he has got yesterday and this will occur every time.

9.2 WHY QUALITY ASSURANCE?

Quality assurance systems have been in operation over a considerable period of time. However, quality assurance, as we know it today, developed in 1962 in the United States of America when (F. Travis, South Australian Builder, March 1992):

"...the USA was having a great deal of trouble trying to get quality products from the thousands of suppliers for nuclear submarine equipment.

In 1963, Canada developed its own construction standard, namely CSA Z299, for power
stations and other construction projects. The Australian power station industry adopted this standard and later developed its own. The United Kingdom followed the Canadian example and, in 1964, developed its own standard known as BS 5750. In 1985, the Australian defence authorities developed the standards AS 1821-23-1985 (Suppliers Quality Systems). Another Australian Standard, AS 2990-1987 (Quality Systems for Engineering and Construction projects) was developed in 1987 and aligned closely with the Canadian series and AS 1821-23-1985. Other Australian standards are also in use today, namely the 3900-1987 (Quality Systems) series. The development of quality assurance systems has spread to other parts of the world, and Europe and Japan now have standard accreditation policies. Changes to the European markets towards the end of this year will undoubtedly result in quality assurance gaining greater importance, not only in these spheres, but also globally.

F. Travis (South Australian Builder, March 1992) claims that:

*In all these cases where quality systems have been installed, it was found that not only was there an improvement in consistency of products or services but also businesses were experiencing significant internal improvements as the development of the systems provided a means for reviewing their business operating methods.*

The success of such a programme is dependent upon a high level of commitment by all members involved in the relevant business, and that commitment needs to be maintained if its full benefits are to be realised. Also, in order to exploit the full potential of the programme, it must be incorporated into all facets of the business. This includes such areas as sales and servicing, accounts, sub-contractors and casual employees.

It is claimed (F. Travis, South Australian Builder, March 1992) that the existence and implementation of a quality assurance programme can have beneficial results for firms:

*It appears that there is a particular high marketing value in having a QA [quality assurance] system in place and being able to prove it. If you have a system which is tailored to the international standards, ISO 9000 series, then your marketing power is even greater.*
The Australian Government introduced the requirements for such standards in 1986 and there were immediate benefits to both the Government and to the businesses which implemented the systems.

In addition:

A business, with a quality system installed, will continue to operate effectively and efficiently despite any management or staff changes.

Series AS 3900 is identical to the international ISO 9000, and these were originally designed for the manufacturing sector, not the construction industry, while AS 2990-1987 has been developed for construction purposes, but is not an ISO standard. However, the AS 3900 series can be modified to suit construction needs. In fact, three such documents now exist, namely AS 3901-1987 (Quality Systems for Design/Development, Production, Installation and Servicing), AS 3902-1987 (Quality Systems for Production and Installation) and AS 3903-1987 (Quality Systems for Final Inspection and Test).

It is claimed (A. House, Building Today, August 1991):

The basic tenet behind the introduction of quality assurance (QA) to the construction industry is the provision of improved productivity to organisations embracing QA principles and better value for money for client organisations.

These dual aims are achieved by an overall improvement in job quality leading to a reduction in the amount of rework required and by a reduction in the number of client supervisory personnel.

The use of quality assurance programmes in the Australian building industry has escalated over recent years. Reasons have already be given regarding its gradual implementation, however, increased acceptance has occurred due to other factors. The building boom of the mid 1980's resulted in massive levels of construction activity. These increases resulted in many development projects being built rapidly, the consequence of which was a reduction in quality of both design and construction. An attitude prevailed amongst the development sector that if construction of a particular building was completed ahead of a competitor, then that first party would be able to reap the benefits of being able to secure the leasing and/ or sale
market. At the same time, there was a desire, on the part of the developer, to complete projects in as short a period of time as possible, so as to minimise financial holding costs and maximise returns. The proprietors effectively ended up paying a premium for this attitude to building, however, the returns usually compensated the outlay (refer Chapter 6).

The trend towards sub-standard construction quality began to change after the boom in the late 1980's to early 1990's. Because the building industry and real estate markets were experiencing greater competition for decreasing availability of work, proprietors were beginning to question the quality of the product for which they were paying. That is, they were placing greater emphasis and importance on the product they were effectively buying, as opposed to the logistics of transfer of that product. This desire to attain better standards of product, together with trends towards risk transfer and shared accountability helped to promote the use of quality assurance systems within the Australian building industry.

Misconceptions exist with respect to the term 'quality assurance', and it is important to realise that quality assurance does not necessarily mean 'good quality'. What it does mean is that the quality achieved correlates with the money expended i.e. 'you get what you pay for'. The proprietor (or other recipient) should get what they want, in accordance with the standard of what was wanted, in the time frame determined, for the cost as applicable. With regard to this issue, however, proprietors should realise that the programme called for and outcomes sought should be cost effective in relation to the expected building life. This results in a need to determine a value or cost-benefit analysis prior to defining the parameters of the programme.

Some of the advantages of quality assurance programmes have been discussed, however, the system also has some shortcomings. These deficiencies are related to matters such as the stage of implementation and sequential effects. The introduction of a quality assurance programme is of considerable benefit to the successful delivery of a project, but consideration must be given to when such a programme is implemented.
Ideally, such a programme should be introduced during the design phase of a project, and then continued through to documentation, construction and commissioning. Under these circumstances, the standards of quality established can be maintained and eventually achieved. In most instances, however, quality assurance programmes are only used during the construction phase of a project. This means that the desirable guidelines cannot be established prior to implementation, by which time most of the governing parameters have been determined, deliberately or coincidentally.

Trends towards non-traditional forms of project delivery have escalated problems of achieving a good or satisfactory level of quality, not least of which is the effect such systems have on the standard of design and documentation (A. House, Building Today, August 1991):

...in-house design checking has frequently been a casualty of either fast-tracked projects or competitive fee bidding for design commissions.

The majority of quality assurance programmes are implemented post-documentation. However, there is an increasing trend towards the establishment of such programmes for the design and documentation phases. Design professionals, namely architects and engineers, are beginning to realise the importance of implementing individual quality assurance programmes, and thus developing manuals for their own application. One firm of architects, namely Woodhead Australia, had their quality manual prepared by a firm called Construction Quality Services Pty Ltd, of Melbourne. Their report read in part (G. Lee, B.O.M.A. News, September 1991):

"The objective of Quality Assurance is to provide documented evidence of the compliance of all phases of the project concerned with establishing project procedures, the requirements of the client as defined in the Design Criteria and the design as expressed by the specification, drawings and other relevant documents, including Building Code, Australian Standards and other requirements referred to therein."

It is claimed (C. Nelson, Building Today, June 1992) that a quality programme is '...inherently more preventative than corrective' and as a consequence, a quality manual is essential. It is recommended that if the manual complies with a quality standard then it
should be written in the same style and structural order.

It is becoming more common for consultants, and other individual businesses, whether they be suppliers, manufacturers, builders, or sub-contractors, to adopt quality assurance programmes and thus develop their own personalised quality assurance manuals. Such manuals should be audited by an independent body or organisation in order to achieve true credibility and recognition (C. Nelson, Building Today, June 1992):

*Quality auditors are people whose job it is to (a) evaluate whether your QA manual complies with the Standard and, if so (b) whether your actual performance matches what our QA manual says you do.*

Quality assurance is directly related to quality management, and design professionals, like other participants in the building process, can benefit from good quality management. In relation to architects, the Royal Australian Institute of Architects has developed a document known as 'CHECKIT!'. It was first published in 1988 and it is claimed (C. Nelson, Building Today, June 1992) that it is ‘...still the best QA tool around for architects, guaranteeing documentation of a high standard'.

For programmes that are only used during the construction phase, a further dilemma exists. The potential for problems to arise relates to the timing and the extent of sectors controlled by the programme. That is, in order for a programme to operate effectively and efficiently, it must be implemented at the outset of the said stage. Likewise, it must have an 'across the board' influence, encompassing all trades, covering matters relating to workmanship, and manufacture and supply of materials, goods and equipment. Failure to secure such controls invariably results in a failure of the system, either in part or in whole. It is, for example, inappropriate to require that plasterboard fixers work to specified quality assurance standards and subsequently 'guarantee' their work if other trades, such as steelworkers and carpenters whose tasks have preceded them, do not have to fulfil the same requirements.

The effectiveness of a quality assurance programme relies upon its continued and complete
use. The greatest successes are achieved if the programme is established, implemented and
maintained for the entire duration of the project. Likewise, its benefits can be realised if all
facets thereof are included. An integral part of a quality assurance programme is the
monitoring of same. It is necessary to review a programme on a frequent and regular basis so
as to identify and rectify any problems or inconsistencies that may have arisen during the
course of the project. Checking and evaluation procedures become fundamental to the proper
operation of such a system since quality assurance works on the principle of "the person
who does the work, checks the work" (B. Miller, personal communication, 8 August, 1991).

However, this system of checking is not limited to a given supplier or sub-contractor.
Depending upon the conditions of tender for any particular project, sub-contractors and
suppliers may be asked to submit their own quality assurance programmes to respective
tenderers during the tender stage. These are then combined with details of the tenderer’s own
programme. The compilation of all these documents is submitted as part of the final tender
offer. During construction, each supplier and sub-contractor is normally required to
complete a proforma providing details of what has been done. This involves the supplier or
sub-contractor undertaking a series of random checks during the course of the works. These
statements are collated to form part of the supplier’s or sub-contractor’s own quality
assurance report. The resultant reports are then submitted to the head contractor or builder.
At the end of the project, the proprietor is furnished with a copy of the final comprehensive report.

Members of the building industry who have been involved in quality assurance programmes
claim that the additional work associated with maintaining such a programme can be both an
advantage and a disadvantage. The benefits exist principally in relation to the written
documentary evidence. An integral part of such a programme is the keeping of records and
files. Such records then provide proof of work as executed and may be used as evidence in the
event of a dispute, claim or latent condition becoming apparent. Such evidence may, in itself,
be considered an advantage or a disadvantage, depending upon the results and any subsequent
The maintenance of these relevant records will invariably mean an increase in the amount of administration required for any given project (A. House, Building Today, August 1991):

*On significant projects, [builders] will normally require a fulltime QA representative. In addition to this, the paperwork required from foremen and others will increase greatly resulting in a need for more staff at this level.*

This extra workload relates not only to the physical keeping of the records, but also monitoring procedures. In particular, the head contractor or builder on a project would be required to ensure not only the maintenance of their own programme but also those of their sub-contractors and other employees and/or consultants as applicable. It may be argued that this extra workload must have an effect upon the final construction cost (A. House, Building Today, August 1991):

*These extra costs to the [builder] will be reflected in higher tender prices, though these are unlikely to be readily identifiable.*

The cost of implementation and maintenance of such a system has to be borne by one or other of a project’s participants. Since the additional costs associated therewith can reportedly (D. Black, personal communication, 6 November, 1991) be in the order of five to ten percent of the overall construction cost, it would not be unreasonable nor unexpected for the original party bearing the cost to transfer same. The transfer eventually results in the proprietor paying a premium for its inclusion. Alternatively, however, this would (or at least should) have long term benefits in respect of rectification and building maintenance costs, thereby offsetting the costs associated with the programme itself.

In addition to the extra costs incurred by the builder, suppliers and sub-contractors, the consultants who implement a quality assurance programme also incur costs (A. House, Building Today, August 1991):
The costs of QA on design work will be reflected in consultants' fees or in internal office design charges. Client and internal audits combined with the unwillingness of professional engineers to sign QA forms unless the QA check has been carried out, will ensure that QA rapidly becomes accepted in most design offices. This should be reflected in a reduction in site variations required to correct design office errors and omissions and a reduction in longer term functional difficulties with projects.

9.3 INCLUSION IN BUILDING CONTRACTS

It is not uncommon for quality assurance programmes to be based on defined specifications and/or performance criteria. The latter is the most difficult parameter on which to assess compliance. One method of assisting evaluation is by the use of an existing 'standard' against which same may be judged.

A major quality assurance programme was implemented on the Parliament House project in Canberra. This project took approximately eight years to complete from design to commissioning, and had a construction cost of $1 billion. A ‘Quality Assurance Group’ was formed by the project’s builder, namely the Concrete-Holland Joint Venture. It is claimed (H. Beck, 1988, p.18) that:

The Group was established by the Concrete-Holland Joint Venture with wide terms of reference for ensuring consistently high standards. This commitment to excellence permeated a workforce of 10,000 strong (with some 2,000 people on site at any one time). Its consequences include the minimal labour disruption and unparalleled safety record which attended construction of Parliament House. More significantly, workmanship everywhere in the building exhibits a spirit of pride and excellence.

Several of the novation contracts considered in the Case Studies in Chapter 8 make provision for quality assurance programmes. It is claimed (B. Millar, personal communication, 8 August, 1991) that the Parliament House project was the forerunner to adoption of quality assurance programmes in these other projects. Such programmes are thus gaining increased acceptance and it is with the development of novation and other 'home grown' contracts that the requirement for the implementation of same may be accommodated.
9.4 SUMMARY

As can be seen from the above discussion, the development, use and increased acceptance of quality assurance programmes within the Australian building industry has lead to changes in the quality of product outcomes. It is also apparent that the implementation of such a system was not only wanted but, perhaps more significantly, needed.

There is nothing new in the concepts of quality assurance and quality control. Quite aside from the historical aspects of the systems in their modern form, the desire for attainment and delivery of quality in design and construction has long existed. It may be argued that for as long as buildings have been built, whether they be of so-called architectural merit or otherwise, designers, builders, tradespeople, artisans and clients alike have also strived for ‘quality’. Quality may have related to matters such as design detail, structural and constructional stability, long-term durability or a combination of these. The passing of time has not changed the desires, wants, needs and variable priorities of the building process participants. What has happened in recent years, however, is a movement away from accepting declining standards and mediocrity towards the regaining of the standards lost.

It is claimed (A. House, Building Today, August 1991) that:

*The real potential savings of QA will never be fully realised until QA becomes second nature to the whole of the construction industry, from design office down to the smaller sub-contractor.*

There are reportedly (B. Miller, personal communication, 8 August 1991) current trends amongst Federal and State Governments to require that builders, major sub-contractors and, to a lesser extent consultants, involved in public works or government-funded projects operate under a quality assurance programme. It may be argued that this will eventually lead to a situation wherein the requirement is a standard pre-requisite and these conditions do become ‘second nature’.
In this final chapter, issues dealt with through the body of the thesis are summarised and are broadly considered in terms of the influences upon the Australian building industry, the resultant outcomes and the subsequent consequences.

10.1 BACKGROUND INFORMATION

Chapter 4 discussed the historical background of contract law, its derivation from English law and subsequent adoption and adaptation to the Australian situation. It was considered important that a brief overview of this historical information be provided so as to afford a basis for subsequent discussions. It also covered aspects relating to legal terminology and legal issues, an appreciation of and familiarisation with which is fundamental to the understanding of contracts generally, and building contracts specifically. An overview of matters such as liability, professional duty of care and limitation of actions was provided.

The most common forms of standard building contracts were discussed in Chapter 5. The forms were considered both in terms of contract typologies and specific documents as developed by and utilised in the Australian building industry today. Where appropriate, the most distinguishing features of any particular contract and/or clause have been highlighted and discussed. This chapter provided the background information necessary to gain an insight into the content and nature of the more traditional forms of contract. These standard contracts have formed the basis of many of the new forms of contract developed over recent years. Later chapters explore issues concerning alternative systems of project delivery and respective forms of contract.
10.2 INFLUENCES

Chapter 6 dealt with some of the more significant reasons behind changes from traditional contracting methods and systems of project delivery to alternative approaches. Reasons included political, economic, industrial and social issues.

10.2.1 Politics

Some consideration was given to the influence attributable to political policies, legislation and attitudes generally. It may be argued that the single most important condition which had a bearing on the principal building industry professions, namely architecture and engineering, was the introduction of the Trade Practices Act. This legislation effectively created the basis for professionals to negotiate fees and scope and level of service. This, in conjunction with other changes within the building industry and society overall, resulted in firms becoming involved in fee cutting practices. At the time of introducing the Trade Practices Act, it was argued by Government that the conditions therein would lead to the provision of better, more competitive services and that the professionals which it influenced would not be adversely affected. The passing of time has proved this wrong and its non-compliance centres around the fee cutting practices which developed and the consequences of those actions.

Political administration has also influenced the Australian building industry in other ways. The most obvious areas of intervention or influence, whether it be positive or negative, are those relating to industrial relations and economics.

10.2.2 Economics

The impact of economics was considered on a macro and micro scale. This entailed a brief investigation of the international, national and local economic policies and trends which
influence the Australian building industry. Perhaps the most significant and identifiable aspect of national economics which affected the industry was the financial sector’s willingness and investor encouragement to “borrow big and send big” during the boom of the mid 1980’s.

The international stockmarket crash of 1987, and Australia’s increasing national indebtedness brought about a major downturn in the building and construction industry. The industry was simultaneously affected by the policies of finance institutions who ultimately suffered losses. Attempts were made to recoup or at least minimise these losses. This was done by ‘calling in’ existing loans and imposing severe restrictions on the approval of new ones. The real estate property market also underwent massive decline, due primarily to decreases in property value. Over-supply and decreased investor confidence and financial support brought about a decrease in demand for new building.

The influence of economic trends within the international sphere was also briefly considered. The boom of the 1980’s saw an influx of overseas money in order to take advantage of Australia’s high interest rates. This provided additional funds to the lending market for various investments, many of which were building developments. The stockmarket crash, recessionary trends and subsequent lower interest rates for investments saw a considerable proportion of these funds retreat off-shore. Imports also had an effect upon the state of the economy and the building industry.

10.2.3 Industrial Relations

Chapter 6 gave some consideration to the issue of industrial relations in the Australian building industry. Discussion was limited to the last two decades, in accordance with the research boundaries of this thesis.

Discussion showed that the union movement has had influence upon the activities of the
Australian building industry. The union movement has gained considerable power and influence and is now considered a formidable force.

10.2.4 Social Attitudes

Chapter 6 discussed some of the issues relating to the changing attitudes of our society towards the Australian building industry and how the development of consumer awareness has changed the nature of many developers. It was argued that they have effectively stopped accepting the products they are given and are now making demands as to what they want and stating what they expect to gain.

Chapter 6 also argued that the proprietors of today are more educated in their rights as consumers than those of past years. However, an obvious lack of knowledge about matters such as design issues, energy conservation, project delivery systems and the building process still exists. This level of ignorance is decreasing very slowly, but in order for any major attitudinal changes to occur within our society, that ignorance must be reduced even further.

10.3 OUTCOMES

Some of the outcomes attributable to the influences were discussed. In addition, there are other outcomes which deserve consideration, including those relevant to project delivery systems, contracts, quality assurance programmes and participants.

10.3.1 Project Delivery Systems

The most common project delivery systems currently in use in Australia today were discussed in Chapter 7. A number of systems exist and they have been developed to meet a
variety of needs. An investigation of the systems revealed that certain methods are better suited to particular circumstances and depend upon the requirements of the developer. Determinants include budget constraints, time programmes, design requirements, buildability and industrial climate.

It was shown that the status and climate of the building industry at any given time will determine the success or otherwise of a particular project and its associated delivery system. This is primarily due to the influence of direct and indirect factors. For instance, if industrial unrest is rampant through the industry, then there is little doubt that the majority of projects being undertaken at the time will be affected in some way. Likewise, if building project funds become readily available and the property market starts to climb, development will increase accordingly. Additional incentives may include changes to taxation laws allowing for activities such as negative gearing.

Chapter 8 discussed the novation system of project delivery. It defined the roles and responsibilities of the various participants and illustrated advantages such as the builder's comparative freedom over design, documentation and construction matters. Advantages for the proprietor included the opportunity to have a significant input into the design of the project, defining the standards required to be achieved, and completion of the project on time at a guaranteed cost. It was shown that the role of the consultants engaged on a novation project changed during the course of it and issues relating to professional liability gain importance for the consultant.

Novation has become popular over recent years for various reasons. It was argued that the most influential factors relate to the general state of the economy and the increasing desire by proprietors to transfer risk. It is the combination of these two factors which has led to the acceptance of the novation system of project delivery by some builders, consultants, sub-contractors and suppliers. In times of negative economic growth such as exists currently, building industry participants become receptive to the concept and proposal of
alternative solutions for project delivery, together with the applicable inherent conditions.

10.3.2 Participants

(a) DESIGN PROFESSIONALS

The role and responsibilities of professionals in the building process has changed over the last two decades. Chapter 6 argued that the greatest variation involves the authority and control that was formerly bestowed upon the professional, in particular the architect, under a traditional system of contracting. In these circumstances, the architect was answerable only to the proprietor and could demand that the builder comply with the design standards and documentation details, in an attempt to fulfil the proprietor's requirements, maintain design integrity and achieve desired quality standards. This is no longer the most common situation, since the influence of alternative systems of project delivery have 're-written' the rules. The consequence of this is that professionals (i.e. design consultants) now often take a subordinate position, effectively acting as secondary consultants or sub-contractors to a builder or project manager. Under these circumstances, the professional is generally not able to adequately or appropriately represent the proprietor's interest, since they are answerable to the builder or project manager.

It was shown that similar conditions exist with respect to novation. In this instance, however, the professional, and in particular the principal consultant, is able to represent the proprietor during the design stage and for the purposes of Brief formulation. Once concepts have been established and standards determined, the consultant is novated to the builder. Although this has its own issues of liability, the consultant's input and professional status is less severely altered than compared with other alternative methods of delivery. It can be argued that the novation system of delivery provides for the best of two worlds: it enables the architect to develop the design and assist in determining standards to be achieved therein taking advantage of the skills design professionals are most capable of and qualified
in providing; and recognises that times have changed, as have proprietor's needs, wants and desires, and that the way professionals operate also has to change in response to those factors.

Another major issue affecting design professionals is that of fee cutting practices. Reasons for this practice were discussed in Chapter 6. It was argued that in respect of the architect, inadequate fees have a direct effect upon the service delivered and the financial viability of the practice. If the architect attempts to 'tailor' the service to reflect the fee, then design, documentation and general professional service will decrease accordingly. An example of this is an architect providing ten hours of service when twenty hours are required to perform the task adequately. Likewise, detailing and general documentation may be kept to an absolute minimum in order to stay within the bounds of pre-determined time frame.

(b) PARA-PROFESSIONALS

Chapter 6 argued how para-professionals such as project managers and, to a lesser extent construction managers, have gained significant recognition, power and influence over the last two decades.

It was shown how these para-professionals, unlike many design professionals, have actively promoted their services. It is true that in recent years their image has declined to some degree and this is primarily attributable to the provision of inadequate or inappropriate service and its relationship to consumerism. Attempts have been made, however, to rectify the situation, including the development and implementation of formal tertiary education courses for training in the fields. Such training also assists in giving credibility to the services they provide.

It was argued that other para-professionals such as building designers have also gained acceptance over the last decade. Their primary appeal to prospective proprietors is the
cheapness of their fees in relation to qualified design professionals (irrespective of fee cutting). This perceived advantage is not, however, generally considered in relation to the service they are qualified to offer nor the quality of the products they design. A lack of public education in the spheres of the building process and design of the built environment further enhances misconceptions.

(c) PROPRIETORS

The nature of proprietors has changed in the last twenty years, and the reasons for such changes were discussed in Chapter 6. One of the most significant changes has been the development and recognition of consumer rights. This single factor has changed the way many proprietors approach their involvement in projects. It also influences their expectations of performance, in terms of the finished product, the services provided by consultants and work performed by the builder.

Of all the participants in the building process, proprietors are arguably now the most advantaged group. This claim relates directly to the development of alternative systems of delivery and contracting. While it may be true that some systems such as design/construct are not generally beneficial to the proprietor, other systems such as novation do have distinct advantages. It was shown that under novation, the proprietor is able to achieve a significant input into the design (and sometimes documentation) process and Brief formulation thereby ensuring that principal objectives and requirements are met. Once the contract has been let, the builder accepts overall responsibility for the design, documentation, construction and commissioning of the project. This single line responsibility and comprehensive warranty system is ideal for a proprietor who wishes to minimise their own risk. It is particularly relevant if the proprietor is inexperienced in the building process and/or unfamiliar with often complicated legal obligations under the contract.
Chapter 7 discussed the various systems of project delivery and identified the principles of each. The lack of responsibility for the builder regarding problems attributable to inadequate or inappropriate design or documentation is a major feature of traditional systems. Under the alternative systems of delivery and forms of contracting, this responsibility has changed. Many of the alternative methods provide for the builder to accept responsibility for all phases of the project including design and documentation. Under these circumstances, the builder also generally has control of all phases from inception to completion and can to a great extent, therefore, determine the final outcome.

It was shown in Chapter 8 that under a novation system the builder, upon acceptance of the offer, warrants the design, documentation, construction and commissioning of the project. The warranty, however, is extended to include any work performed or produced prior to offer acceptance. While this has obvious advantages for the proprietor, the benefits to the builder are a little more ambiguous. The Case Studies illustrated that some novation contracts and associated conditions of tendering provide for tenderers and the subsequent successful builder to make changes to materials, plant, and equipment provided that such changes do not detract significantly from the Brief or conceptual design. Occasionally, tenderers may also be allowed to submit alternative structural proposals. To this extent, the builder is able to gain some control over the whole project instead of only constructing it.

The primary consequence of systems which involve more than construction alone is that the builder's liability is increased and its scope broadened. This has resulted in many novation contracts calling for the builder to provide personal professional indemnity insurance. Such insurance was previously only applicable to design professionals. However, developments in relation to interpretation of 'design responsibility' have led to its application in relation to any party assigned with responsibility for design and documentation.
Chapter 6 argued that builders are commonly perceived (by proprietors and the general public) as being the only 'necessary' participant in the building process, and this is reinforced by the general lack of education in the process of building and the operations of the Australian building industry. In turn, this lack of education results in decisions being made in terms of bricks and mortar (tangible items) not 'ink on paper' (i.e. drawings). This, in itself, would not be a problem if the final product could be adequately and appropriately evaluated, but unfortunately this is often not the case.

(e) **SUB-CONTRACTORS**

The nature of the sub-contracting system in the Australian building industry was discussed in Chapter 6. The nature of the building process is such that work must be executed on a staged sequential basis wherein one trade will commence its work upon the completion of work by another. Each trade involves specialist training and skills and is highly dependent upon preceding trades.

This inter-reliance of trades has, therefore, a major role to play in the area of quality control and quality assurance. It is inappropriate to expect one trade to guarantee or certify the quality of its work if the same or equivalent guarantee cannot be provided by preceding trades. This is particularly relevant when considering long term implications. Many subcontractors are now fully aware of the advantages of quality assurance and have developed and implemented their own programmes and manuals as a result.

It was shown that novation, like quality assurance, is a matter which has raised some concerns amongst sub-contractors. These concerns have been based primarily on a lack of knowledge and understanding of the novation system itself, its principles and particularly its consequences. Misunderstandings about risk transfer and the implications of it have led to situations where the sub-contractors have priced themselves out of consideration in a tender or, conversely, have underestimated the value of the risk (refer Chapter 8). Tendering
builders should ensure that sub-contractors submitting prices to them are fully aware of
the novation process and its consequences. In that way, the prices received will accurately
reflect the work to be executed and the associated risk. To date, novation contracts have been
implemented on significant multi-million dollar projects, involving relatively large sub-
contracting firms. Novation is better suited to these larger firms since they have a greater
capacity to absorb any losses that may occur.

Another significant influence upon the sub-contracting sector of the building industry is that
of industrial relations and policy. Of all the union involvement in the industry, the strongest
union impact has been upon sub-contractors. Sub-contractors who employ approximately
eighty five percent of the workforce on any given site, invariably employ the largest number
of union members. Union membership may vary within one sub-contracting trade which can
present problems in its own right. However, despite the connection between union and sub-
contractor, decisions regarding changes to awards and conditions rarely involve consultation
with the sub-contractor. Discussions are held between unions and government in relation to
awards and so on, while discussions between unions and builders determine matters such as
individual site conditions. The consequence is, however, that these decisions must then be
accommodated by the sub-contractor, and eventually the proprietor.

(f) LEGAL PROFESSIONALS

The increasing involvement of the legal profession in building industry matters and
contracting was discussed in Chapters 6 and 8. Involvement has increased in the last decade
and is related to advising clients (proprietors, builders, consultants, para-professionals),
contract drafting, litigation and, to a lesser extent, union representation.

Client advice encompasses matters such as advising on forms of building contract including
the proprietor's and builder's rights and obligations under same, and the legal implications
of certain systems of project delivery. Potential proprietors who undertake to make
themselves familiar, in a legal sense, with the terms and conditions of a given form of contract, are generally acting responsibly. The reasons for taking such action are usually twofold, and include a genuine desire to meet their own obligations and concurrently attain an understanding of the obligations and responsibilities of the other party, namely the builder. This may be extended to a third party such as an architect or superintendent.

It was argued that this familiarisation process is of greatest importance if the potential proprietor is inexperienced in the building process and contracts. Such unskilled proprietors are at significant risk of being exploited if they have the misfortune of dealing with an unscrupulous project manager or builder who chooses to manipulate the contract and, therefore, the proprietor to their advantage. In this instance, such manipulation may only be successful if the contract remains untested under arbitration or litigation proceedings. It is in the proprietor's interest to acquire the necessary knowledge at the outset of a project.

In the case of new or amended forms of standard building contract, the legal professional can become involved in the contract drafting process. Perhaps the single most important aspect of amending contracts is the avoidance of ambiguities, contradictions and conflicts. That is, it is critical if a clause is deleted or changed that such action does not contradict or conflict with another clause. Likewise, in the case of a deletion, it should not create an ambiguous situation by its removal. Care must also be taken so as not to increase the risk of dispute by way of complying with any desire to create a more 'sophisticated' contract. The legal professional, therefore, has a duty and obligation to the client to consider the direct and indirect consequences of any action. Words should not and cannot be read in isolation, but must be considered collectively if a true and accurate interpretation of a given document is to be achieved.

The vast majority of potential proprietors who become involved in the building process do not consult a member of the legal profession prior to entering into an agreement. This is
particularly true when standard building contracts are used. This fact, together with a usually minimal understanding of contract law, can lead to legal action being sought. As a consequence, if a dispute arises during the course of a project, the legal professional may become involved in litigation proceedings. This situation has predominantly utilised the skills of the legal professional experienced in construction matters, and represents the area to which the popular perceptions of involvement can most frequently be attributed.

10.3.3 Contracts

The project delivery systems cannot be considered without also looking at the contracts which have been developed to implement them. The most common standard forms were discussed in Chapter 5, while detailed consideration of novation contracts was provided in Chapter 8.

All contracts cover some common issues while particular contracts also provide for the inclusion of specific clauses. The contracts considered can be broadly divided into two groups: those that are standard and are, therefore, general in application; or those which are 'home grown' or specifically developed for individual projects.

Uniform provisions include interpretation, security and retention moneys, nominated subcontractors, provisional sum adjustments, insurances, site, setting out the works, times for commencement and completion, defects liability, variations, warranties, certificates and payments, settlement of disputes and notification of claims. Other provisions which may apply to a number, but not all standard contracts, include a superintendent and default or bankruptcy. In the case of the latter, some contracts only provide for this situation in respect of the builder, while others provide for the builder and the proprietor.

In all cases except that of novation, building contracts are independent documents. That is, the building contract forms the primary agreement between the parties, namely the builder
and the proprietor, and it remains in place, unaltered, for the duration of the construction phase. A consultant agreement may exist between the consultant and the proprietor, or the consultant and builder or project manager, depending upon the project delivery system and form of contract used. In either of these situations, however, this secondary agreement is separate and has no real bearing or influence upon the building contract. A partial exception to this situation relates to the use of a JCC contract in conjunction with a traditional delivery system, wherein the architect acts as the proprietor's agent, and carries out the duties of assessor, valuer and certifier under the building contract.

In novation, the building contract is generally written specifically for use on a particular project. An exception to this is the Australian Department of Defence standard 'Document and Construct' contract (refer Chapters 7 and 8). It was shown that these novation contracts may be drafted with some degree of originality, but more frequently they are based on an amended form of one of the standard contracts in use within the industry such as AS 2124 or NPWC 3. Although the building contract may be deemed to be the principal agreement, its relationship with two other documents cannot be ignored. These additional documents are the consultant agreement and the deed of novation. Whether one or more of each of these additional documents is used will depend upon the circumstances surrounding each individual project. It was argued that due to the nature of the novation process, these additional documents form an integral part of the overall contractual agreement and its implementation.

It was shown that perhaps the most obvious difference between a novation contract and one like JCC, for example, is that the consultant's involvement is not provided for under the novation building contract itself. That is, their involvement does not, at least theoretically, include the construction phase. However, they may still be contributing to the construction stage by way of the implementation of a separate and new agreement between the consultant and the builder.
It was shown that specific clauses have been provided in novation contracts and these include quality assurance, builder's professional indemnity insurance, and industrial relations. It is these very clauses which differentiate novation contracts from others. These clauses cover issues which are of particular relevance, not only to the system and form of contract, but more importantly to the nature of the building process and industry in Australia today. It was argued that novation contracts are agreements which most appropriately reflect the current status of the Australian building industry since they attempt to meet the needs, desires, requirements and expectations of today's participants.

Although the merits of 'home grown' contracts can be identified, standard contracts have one distinct advantage over these alternatives. The benefit relates to the fact that they are 'standard', and in most instances have existed for a considerable period of time. This time factor has allowed these documents to be tested during the course of projects. Testing relates to application during the course of execution of the works and involves its use as an administrative and management tool. Testing also involves determination of the enforceability of the terms and conditions of the contract in a court of law. It was argued that a contract's enforceability can only be tested if a dispute or claim arises. All the standard contracts, namely JCC, AS 2124, and NPWC 3, have been tested in the courts or through the processes of arbitration.

This testing procedure has led to a series of reviews of the documents and subsequently resulted in same being periodically amended. This assessment, evaluation and revision procedure is important for several reasons. The first being that it identifies mistakes, faults, and ambiguities and allows them to be rectified so that they do not occur with future applications. The second is that it highlights areas of frequent concern, argument, dispute or claim which may be the result of ambiguities or other discrepancies. It is this latter issue which bears the greatest impact upon the enforceability of a contract, and the one which generally receives the most attention. However, review procedures invariably involve committees, and it is the nature of this revision structure and process which assists in the
delaying of action being taken. That is, the more people involved in the review, the greater the length of time involved to firstly consider all relevant points, secondly make a decision and thirdly take the necessary action.

Chapter 8 argued that a high proportion of novation projects, at least the major ones, were considered to be successful in their execution. As a result, the contracts were not tested in the courts and, therefore, their enforceability could not be determined at this stage. The proponents of novation argue that the nature of the process is such that it invariably provides for a successful project i.e. no other result is possible. However, it may conversely be argued that the reason disputes and claims have not arisen is because it is the builder who usually is responsible for all the administration involved with it, and invariably maintains all associated risk. These two factors could be a considerable deterrent to the dissatisfied party (frequently the builder). It was argued that an alternative yet related reason for a lack of disputes and claims was that the risks have been adequately priced into the project from the outset. This effectively reduces the desire and perceived need by the builder to recoup any losses that may eventuate. This is in direct contrast with some more traditional forms of delivery which provide for the claiming of variations for a variety of reasons including lack of information.

Whatever contract is selected for any given project, there are three criteria which must be met in order for the project to proceed efficiently and successfully. The first relates to the system of project delivery: it is essential that the system chosen adequately meets the needs of all the participants. The second is that the contract employed accurately represents the interests of all the parties and that their intentions can be fulfilled. The third is that the participants are each capable of and willing to meet their responsibilities and obligations under the contract. Non-compliance with these criteria will result in an unsuccessful project, both in terms of the system of delivery and the contractual document.
10.3.4 Industrial Relations

A review of the various Case Studies in Chapter 6 revealed that novation contracts, for example, specifically include industrial relations provisions. Such provisions are not part of the standard forms of contract. The power and influence of unions has not only been recognised, but has been catered for in an attempt to reduce the incidence or the effects of industrial dispute and subsequent action. It may be argued that unions are a necessary component of today’s working society. This deserves due recognition when making comparisons between the working conditions of decades past, and those of today.

10.3.5 Quality Assurance

Quality assurance (QA) was discussed in Chapter 9 and to a lesser extent in chapter 8. It was shown that as far as contracts are concerned, the standard forms do not provide for quality assurance programmes. Reference is often made to the standard of workmanship, plant and materials, but that is generally the extent of the provision. It was shown that in some of the alternative contracts like novation, however, quality assurance is provided for. It is usually referred to in terms of the establishment and maintenance of a QA programme and the use and application of a QA manual.

The QA programme may apply to the design and documentation phases as well as construction, although it is the latter stage only which most frequently incorporates one. In the case of full project coverage, the QA programme encompasses the design and documentation processes and the associated work and co-ordination of all consultants. During construction, the programme incorporates the performance and work as executed by the builder, sub-contractors and suppliers. Each party has their own set of responsibilities and obligations which must be met. Failure to fulfil them may be viewed as a breach of contract. It was shown that the implementation of a QA programme is often seen by the proprietor as an ‘insurance policy’ against faulty or non-complying materials and workmanship. A QA
programme provides for quality commensurate with defined performance criteria and the money expended to achieve it. It does not necessarily mean 'high quality'. That is, the quality of the requirements as defined are assured, as opposed to a product of high standard being delivered.

The provision of a QA manual applies to each of the parties governed by the QA programme. It was shown that on any particular project such manuals may be required of all design consultants, the builder, sub-contractors and suppliers, depending upon the extent of the programme's application. A QA manual defines the standards to be observed or criteria to be met. Work performed or executed can then be assessed and evaluated against these standards and criteria to determine whether they have been actually been achieved.

In order for a QA manual to be correctly utilised it must co-exist with two other principles. These are quality management and quality control. The QA manual may be viewed as the tool for implementing and monitoring quality assurance. Quality management is the method by which the manual or tool is used, while quality control is the means of ensuring compliance with the manual and, therefore, the programme.

Quality assurance has developed in its present form in response to identifiable and definitive needs within the industry. These needs include a desire to return to the standards expected and achieved in former, reportedly more reputable days of building; the desire of all parties to share risk and more clearly define the transfer of liability; the need to produce detailed written records of work as executed during the course of the project; and the meeting of the expectations of a more consumer-oriented society. All these needs relate to the current status of and attitudes within the Australian building industry. It was shown that in the case of novation contracts the inclusion of QA programmes is now an integral part of present day project delivery and contracting.
Over the last decade, trends within the Australian building industry, the legal profession and society generally have seen an increase in the amount of cases involving litigation. There appears to be an adoption of the ‘American attitude’ of “sue first, ask questions later”. This litigation mentality has proven to be costly not only in terms of money expended, but also time lost, with losses attributable to all parties involved in the action.

The matter of alternative dispute resolution is one which is gaining greater emphasis and support within the Australian building industry. It covers the issue of providing choices with respect to dispute resolution methods and may also relate to the use of non-traditional methods.

It was shown that most contracts provided for at least two defined procedures. However, the nature of those procedures may vary. The first course of action usually involves the disputing party lodging a detailed claim to the other party or the superintendent. In some instances, negotiation may be the next step or alternatively the superintendent may be required to make a decision on the matter (as is the case in AS 2124). Most contracts, including JCC for example, do provide for disputes to be referred to arbitration in the event that any previous negotiations, disagreement with the claim or superintendent's decision have failed or not been accepted. Some contracts make no more provisions after arbitration, while others expressly provide for choosing between arbitration or litigation (refer Case Study 3, Chapter 8) as a method of resolution. It was shown that some contracts, such as NPWC 3, place all the onus of submitting a claim (or defending one) and providing details thereof, within a specified period of time, upon the builder.

Several of the Case Studies considered in Chapter 8 have distinctively different methods of dispute resolution. In Case Study 2, the novation contract differed from standard ones in that it provided for an 'expert' whose role and function is different to that of an arbitrator. In
this instance, the expert's decision was final and binding, and arbitration was not expressly provided for under the contract. The contract used in Case Study 5 also provided for an expert, but in this case the party was known as an 'adjudicator'. This particular contract varied from Case Study 2, however, in that arbitration or litigation were also provided for in the event that the adjudicator's decision is challenged. The novation contract used in Case Study 4, only provided for reference to the superintendent in the first instance and, failing acceptance of the decision, the matter could be referred to a court of law. Arbitration was not expressly provided for under this contract.

10.4 CONSEQUENCES

The consequences of alternative contracting systems and their associated contracts are numerous and relate, in many instances, to the influences and outcomes discussed previously. Some are significant while others produce only minor effects upon individual participants, the community or the building industry generally. This section considers these consequences and the anticipated future directions of the Australian building industry, its participants, project delivery systems and contracting.

10.4.1 Participants

(a) DESIGN PROFESSIONALS

The most significant consequences of alternative contracting systems relate to the roles, responsibilities and liabilities of the professional. Inherent liability associated with work undertaken provides the greatest concern for professionals. Although some discussion has been had over recent years with regard to the introduction of a statute of limitations, no comprehensive governmental legislation yet exists limiting the liability of these professionals. Architects in particular are effectively liable for the performance of their
duties for an indefinite period of time. This means that if a problem attributable to an architect arises on a project, the architect can be sued at any time. The results of several court cases have revealed that retirement or even death will not negate liability. Although an architect may be engaged by a specific party (say a proprietor) responsibility for work performed remains with the building. This means that although building owners may change, the architect retains liability.

In the case of alternative systems of delivery and contracting, the professional is liable, in the first instance, to the builder, project manager or other party by whom they are engaged. This line of responsibility remains effective for the duration of the project, and then remains with the particular building. In the case of novation, the professional is liable to the proprietor up to the point of novation and then to the builder after novation has been effected. Upon completion, liability remains with the building. Although the builder accepts overall responsibility for the project, the consultant will not escape professional liability in the process. In the case of novation contracts, the design professional will need to establish a clear definition of the scope of services applicable to each circumstance, and notify their professional indemnity insurer that they will be a party to this form of agreement. Failure to do the latter has the potential to negate the insurance cover.

Since design professionals can be found liable for such things as negligence and/or a failure to exercise a duty of care, project delivery and contracting systems which minimise or eliminate such risk should be given due consideration. Other protective measures can be taken, for example, by implementing a quality assurance programme during the stages of the project in which the professional will have an involvement. A QA programme can be recognised as providing an acceptable level of duty of care and, at the same time, will assist in achieving quality management and quality control.

Chapter 6 discussed the issues associated with fee cutting practices. Although some members of the architectural profession choose to deny that fee cutting exists, recent investigations by
organisations such as the Royal Australian Institute of Architects (R.A.I.A.) and the Association of Consulting Architects (A.C.A.) have revealed that the extent of the practice is relatively widespread. There is little indication that the situation will change and it is anticipated that the practice will continue.

The majority of architects would agree with the notion of negotiating fees for any given project, thereby effectively complying with the requirements of the Trade Practices Act. It was shown that problems do arise, however, when the fees negotiated do not fairly or adequately represent the work to be performed. Failure to appropriately price one's services creates its own difficulties both for the architect and the client.

Although there is little chance of this Act ever being changed (by any political party) it should, it can be argued, be amended. Such amendments could incorporate a minimum fee for services. Whether that minimum fee is calculated on a percentage of the project's value or hourly rate basis is debatable. This modification will have a twofold effect. In the case of the professional, the services could be accurately and adequately determined on the basis of services to be provided, both in a quantitative and qualitative sense. This, in turn, will provide against the professional acting in a manner or to an extent which would jeopardise their viability. In the case of the client or consumer of services, a more definitive evaluation of those services should be made. That is, if professional fees accurately correlate with professional services, the client will be in a better position to assess the services offered in the first instance, and evaluate them at the conclusion of the agreement between the parties.

The connection between fee cutting practices and alternative forms of building contract may seem tenuous. However, these and other practices have contributed towards the decline in the status and authority of architects and other design professionals in the building process. This, in turn, will continue to create an environment in which the services these professionals offer are seen as insubstantial or, at best, limited. Their eventual inclusion in or exclusion from the project delivery system and form of contract used will thereby be
In view of the changes that have occurred to the professions over recent years, professional representative bodies need to play a more active role. They need to address a variety of issues including fee cutting, liability, quality assurance and professional conduct. In respect of the R.A.I.A. some action has been taken. This includes the production of a quality assurance document/guide known as 'CHECKIT!' and negotiations within political circles for a statute of limitations on liability. If advances in areas such as limitation of liability are to be achieved, representative bodies must act quickly and be thorough in their approach. It is, after all, the 'vocal minority' that will achieve its aims and objectives.

(b) PARA-PROFESSIONALS

The inclusion of project managers and construction managers in project delivery systems such as design/construct and novation has resulted in them gaining acceptance within the building industry. In addition, their repeated use on government projects means that the promotion of para-professionals as being a necessary component in the building process will continue.

The consumers of services by building designers are often ill-equipped to make judgements about 'good design', or appropriate service and advice. While these circumstances persist, these para-professionals will continue to thrive. However, the offer of 'design services' should be made and evaluated on a comparable basis of level of education, training, experience and acquired skills.

(c) PROPRIETORS

It is anticipated that the trends which have led to the development and adoption of the current forms of novation contract will continue. Some modification, especially in regard to the
degree of risk transfer, may be necessary as time progresses and the economic situation improves. However, the celebrated success of novation projects such as those discussed in the Case Studies of Chapter 8 will ensure that this system of delivery and form of contract will be used in the future. It is anticipated that a standard form of novation contract will be developed for use in the Australian building industry, and that it may even be based on the Department of Defence 'Document and Construct' standard contract.

It was argued that with respect to interpreting and understanding drawings (or other presentation media) an ability to comprehend the design and, more importantly, the consequences of the design, would undoubtedly lead to situations whereby the proprietor (or others) could pose questions regarding aspects of same and make valued judgements.

The Case Studies showed that increasing demands by proprietors for a quality of product commensurate with money expended, has led to a situation wherein proprietors’ priorities focus more frequently upon a builder’s performance capability rather than acceptance of the lowest price. It is anticipated that this attitude will continue to prevail, and that demands for ‘quality’ will increase both in frequency and scope.

(d) BUILDERS

One of the more significant changes to the systems of project delivery and forms of contracting in use today relates to the requirement for builders to obtain their own professional indemnity insurance. None of the standard forms provide for this, however, it was shown that novation contracts usually do accommodate it. Implicit in its inclusion is the notion that responsibility for design and documentation services should not be limited to those participants actually preparing the work but extends to those offering to provide it. It is anticipated that in developers’ endeavours to transfer liability even further, this provision will continue to be a requirement on future projects employing alternative systems of delivery and contracting.
It is anticipated that building firms of the future will be fewer in number, but consist of a combination of very small and very large organisations. The reasons for this are much the same as those for professional practices and sub-contractors. Changes in emphasis relating to capability and resources are the primary influences. In the case of the larger firms, their creation is related to the trends towards risk transfer. That is, as proprietors place greater demands on builders to accept larger and more wide-ranging levels of risk and liability, builders will need to have the capacity to undertake same. This will eventually determine the minimum scale of firms. Larger firms also have a tendency to undertake the largest projects. In turn, this has an effect upon the economy, building industry and the union movement. Under these circumstances the builder will maintain an influential position in the building process and within the Australian building industry.

(e) **SUB-CONTRACTORS**

Quality assurance in respect of its importance to sub-contractors was discussed. Trends such as government bodies demanding quality assurance programmes be implemented on their projects; the inclusion of quality assurance provisions in many of the new ‘home grown’ contracts including novation; and increasing concern throughout the building industry regarding liability and risk transfer, means that QA will continue to play a major role in project delivery in the Australian building industry. It is also anticipated that its use will increase and its scope broaden significantly beyond the construction phase of project delivery.

Future developments in industrial relations policies will need to recognise the fact that sub-contractors are also participants in the building process. Their needs will have to be recognised and accommodated if the Australian building industry is to continue operating in an efficient manner.

The future of the sub-contracting system will remain the same unless changes to the
industry are implemented. Changes currently being proposed by bodies such as the A.C.T.U. include the compulsory unionisation of sub-contractors themselves and the insistence that sub-contractors only employ union members. If this does come into effect, the sub-contracting industry will change irrevocably. Changes will include a reduction in the number of sub-contractors (since many are opposed to the notion of compulsory union membership), and a merging of sub-contractors to form larger firms capable of surviving under such a system. Other changes within the building industry having an effect upon sub-contractors is the increased use of industrialised building techniques. Such practices are, in some instances, altering the skills required of sub-contractors. This means that some current skills will be lost in years to come, while others will have to be attained in order to continue operating within the industry.

(f) LEGAL PROFESSIONALS

It was shown that the involvement of legal professionals in the building process has increased over recent years. Perhaps the most significant advances, of those outlined, have been in the area of drafting new contracts or amending existing ones for adaptation to particular projects, as is applicable to novation contracts. In cases such as these, the professional's services are incorporated into the building process during its initial stages as opposed to being limited to dispute resolution. This has obvious advantages with respect to appropriate risk identification and allocation, and endeavours to minimise dispute potential. However, it is imperative that any deviation from the use of so-called standard contracts is carried out in a thorough and comprehensive manner. The use of legal professionals will continue and, it is anticipated, increase in accordance with future developments within the Australian building industry and trends in respect of contracting and project delivery systems.
4.4.2 Alternative Dispute Resolution

It is important to consider dispute resolution methods since these invariably have an effect upon the development and drafting of contracts and the building and contracting processes. Inclusion in contracts has been discussed, but implications also exist for the methods of testing and evaluating enforceability. It was shown that the provisions made in any given contract can be interpreted differently, depending upon whether the dispute has been referred to an expert, arbitration or the courts. Therefore, the intent of the agreement needs to be clearly established and defined such that disputes can be dealt with fairly and appropriately regardless of the method of resolution. It is anticipated that in the future dispute resolution, and indeed alternative methods of it, will be investigated, tried and implemented in an effort to reduce costs and minimise delays.

10.4.3 Community Interests

Chapter 6 discussed the benefits of education of proprietors and the general public in the building process and industry matters. If introduced, such a range of education will have a twofold effect.

Firstly, these participants in the building process will be more aware of the nature and complexity of the said process and relevant inter-relationships. This will create a situation wherein all the participants will be on a ‘level playing field’, as opposed to one party being significantly more informed than another. Consequently, the ability for one party to manipulate the other or the circumstances surrounding the project will be minimised.

If current and future proprietors are educated in the process of building and how their needs, both long and short term, can best be met they will be able to make more informed judgements about the design and delivery of their projects. This knowledge of the process will also lead to a situation of each party being aware of their own, and other participants’
rights, responsibilities and obligations under the agreement. It is anticipated that these circumstances will create an environment of understanding and promote co-operation between the parties. Other benefits to an informed proprietor include a greater comprehension of the project at the design stage and, therefore, of the building product before completion. This will ensure that the proprietor is familiar with the proposed scheme, thereby reducing or negating the risk of misinterpretation, misconception and ignorance. Consequently, the chances of proprietor dissatisfaction with the outcome will be minimised since compliance with the requirements of a Brief will be able to be monitored, reviewed and revised at an early stage.

Secondly, the education of the public in matters associated with the Australian building industry, the building process and the built environment will help to rid the industry of unethical practices, and the built environment of ugly and inefficient buildings. In addition, if members of the general public are educated about the built environment, in terms of both its benefits and shortcomings, they will be able to judge outcomes on the basis of acquired knowledge rather than assumed opinion. This, in turn, would result in buildings which are of a higher design and construction standard, thereby creating a built environment which benefits all of society not just the parties to any given project (including the egos of the designers).

Programmes introduced to cover matters such as design of buildings and other products including furniture, household goods, jewellery and graphics could be targeted at primary school level. More complex issues relating to the building process and so on could be directed at the secondary school level. These subjects could form a part of the compulsory curriculum and/or be introduced as elective subjects. In effect, these matters could be dealt with in the same manner as other topical issues such as ‘the environment’ are being addressed today. It should be remembered, that education about the environment was considered unnecessary and inappropriate less than a decade ago, however, this is no longer the case. It is anticipated that continued promotion of the concept of community-based education about the Australian
building industry will bring about the development of such courses.

The potential benefits of such education programmes include a more efficient building industry and more informed population. This will create a built environment which provides a good living and working environment and a more efficient society: efficient in terms of energy, resource consumption and productivity. However, in order for a wide reaching education programme to be implemented and become effective, it will need the co-operation of a range of groups and individuals including Local, State and Federal Governments. It will need the co-operation and input of members of the building industry including proprietors, builders, design professionals and other consultants, suppliers and sub-contractors, developers and finance institutions. In addition, it will require recognition by the general public as being just as important to the future of the country, its inhabitants and society as other so-called environmental issues are today.

10.5 SUMMARY

It has been argued that the nature of the Australian building industry has changed over the last two decades. Some of the most significant changes have related to the roles and responsibilities of the participants in the building process, project delivery systems and contractual issues.

Various issues have been discussed including fee cutting practices, professionalism, education, quality assurance, unethical practices and, to a lesser extent, corruption. All of these matters have and will continue to have an influence upon the nature and operation of the industry. Issues such as unethical practices and corruption have the potential to be very damaging, while others such as quality assurance can be turned to advantage.

The Australian building industry, like many industries, is historically slow to react to
change or even the proposition thereof. Maintenance of the status quo is usually perceived to be the only solution. Endeavours to implement change are often met with negative response and outright rejection. Therefore, the establishment of an environment receptive to discourse and incorporating education is required. Education includes the identification and promotion of the benefits and disadvantages of various practices and courses of action. The long term implications of them need also be considered.

A concerted and co-operative response by all participants who may have an influence upon the industry is required. Governments will also have a role to play in instigating reviews and investigations and creating the basis for discourse and debate thereby bringing about the necessary changes. Opportunity still exists for further change, advancements, productivity, quality and efficiencies in the operation of the building industry and project delivery including contracting procedures.

Although the influences and outcomes of the trends within the Australian building industry have specific consequences for each of the participants in the building process, two underlying common factors pervade. These take the form of co-operation and communication. They are cross-disciplinary and inter-related. In order for any project to have a successful outcome, a minimal degree of co-operation and communication must exist between all the participants involved. These factors are essential ingredients in the building process and will have an inevitable effect upon the project delivery system and the form of contract utilised. That is, if a situation arises wherein conflicts exist between participants, the process and subsequent result will not be successful. The degree of difficulties experienced will vary with the nature and extent of the conflicts. The avoidance or resolution of disputes is directly related to the level and standard of communication between the parties.

Consequently, the success or otherwise of any given project will depend largely upon the level of co-operation and status of inter-personal relationships between participants. It is a combination of the attitudes of these participants and a variety of other external influences
which have a bearing upon the system of project delivery and form of contract selected. The delivery system and form of contract are instruments which contribute to the building process. They are not the solitary determinants of that process.
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