Contract Arrangement For Building Services Industry
屋宇裝備業界的合約

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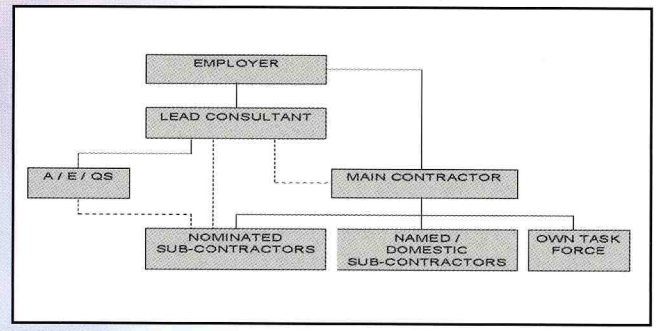
(Adapted from the HKIE BS Division course lecture on 2 August 2007)

I. THE CONSTRUCTION INDUSTRY IN UK

The industry structure in the UK is characterized by specialization and consequently fragmentation. The traditional project hierarchy consists of employer, architect, consultants, quantity surveyor, main contractor, specialist contractors, etc. interwoven in an adversarial environment under the common law legal framework



The use of sub-contractors, whether nominated, named or domestic, is widely practiced.

The same subletting approach is found in design sub-consultants as well.

Resultant Standard Forms of Contract

Contract is contract (when dispute arises).

The Conditions of Contract aim at the equitable risk allocation vs control amongst the various stakeholders – a balance among project price, quality & programme. Because of the varying but unique characteristics of each and every construction project, no single standard form of construction contract can fit all situations. The Joint Contracts Tribunal (JCT) is long established to devise a comprehensive series of standard forms of building contract and is tabulated below to indicate the diversity and sophistication involved.

1. JCT Contract Forms

REF.	TITLE
SFBC	• Standard form of building contract 1980 • Private with quantities • Private with approximate quantities • Private without quantities • Local authorities with quantities • Local authorities with approximate quantities • Local authorities without quantities
-	Fluctuations clauses for last • Private • Local authorities
-	Sectional completion supplement for standard forms 1980
-	Conditions only versions of each of the six variants of the SFBC
IFC	Intermediate form of contract 1984
MWA	Agreement for minor building works
WCD	Standard form of building contract with contractor's design 1981
CDPS	Contractor's designed portion supplement 1981 for standard forms 1980
MANCON	Standard form of management contract 1987
WKCON	Works contract 1987 for management contract • Invitation to tender • Tender • Articles of agreement • Conditions of contract • Employer/works contractor agreement

REF.	TITLE
PCS	Phased completion supplements 1987 for • Management contract • Works contract
PCC	Fixed fee form of prime cost contract 1963 (final revision 1977)

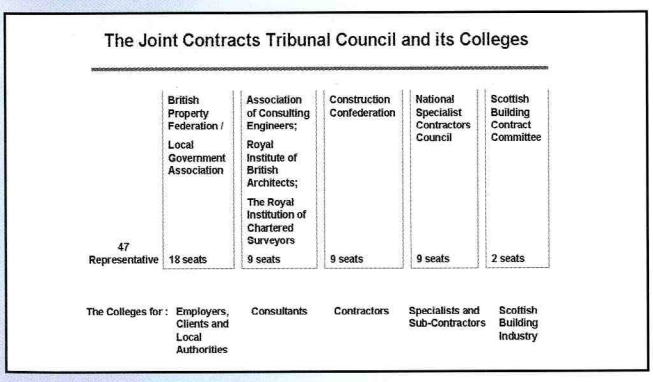
2. JCT Subcontract Forms

REF.	TITLE
	For use with the basic method of nomination under the SFBC
NSC/1	Tender
NSC/2	Employer/subcontractor agreement
NSC/3	Nomination instruction
NSC/4	Nominated subcontract
	For use with the alternative method of nomination under the SFBC
NSC/2a	Employer/subcontractor agreement
NSC/4a	Nominated subcontract
	For use with the naming method under the IFC
NAM/T	Tender
NAM/SC	Named subcontract

3. JCT Related Forms

REF.	TITLE
DOM/1	Domestic subcontract to the SFBC
IN/SC	Domestic subcontract to the IFC
DOM/2	Domestic subcontract to the SFBC WCD

The JCT as the collective industry body enjoys balanced representation from developers, designers, main contractors and sub-contractors.



The counterpart for civil engineering projects is the Institution of Civil Engineers (ICE) range of Conditions of Contract. Due to the exposure to the vagaries of external factors (uncertain ground conditions, surrounding infrastructure, inclement weather, etc.), the Engineer is empowered greater authority to influence the contractor's programme and operational method statements.

Worthy of mention is the good intention of ICE in developing the New Engineering Contract (NEC) series using simple user-friendly language and an equitable collaborative contractual approach. Below is an abridged listing of the available forms.

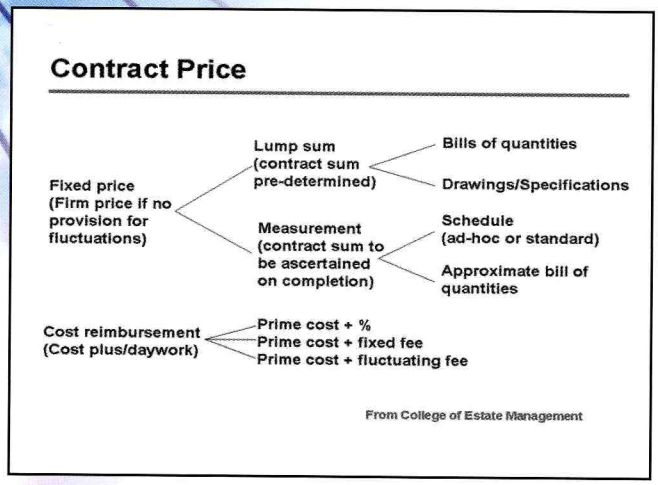
REF.	TITLE
ICE	General conditions of contract for works of civil engineering construction, fifth edition
ICE/SC	Subcontract for works of civil engineering construction
NEC	Engineering and Construction Contract Engineering and Construction Contract Partnering Option Engineering and Construction Subcontract

The UK Government compiles its own set of General Conditions for government building and civil engineering contracts.

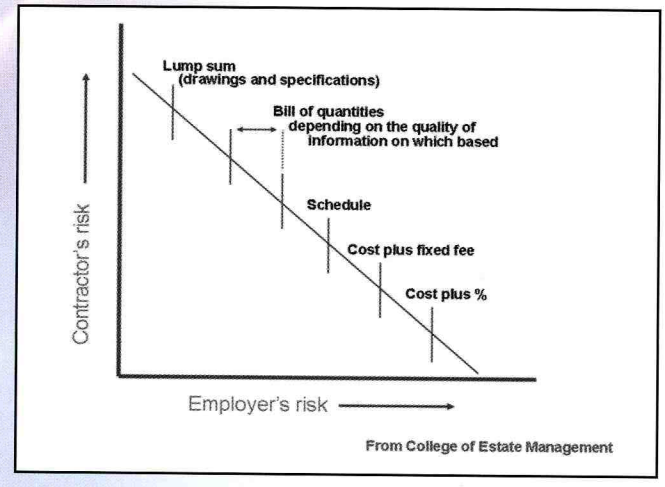
REF.	TITLE
GC/1	General conditions of government contracts for building and civil engineering works, second edition
GC/2	General conditions of government contracts for minor works
GC/SC	Subcontract conditions of government contracts for building and civil engineering works

All the above sound very familiar as the practice in Hong Kong was and still is very much modeled upon the UK system.

In a broad brush, we can classify standard forms of contract into the following:



It is obvious that with lesser risk to the Employer, the Contractor will have to price for his greater risk.



It should be noted that Continental Europe, say France, widely uses the FIDIC (acronym in French) Form which is also adopted for most international tenders in Mainland China.

General principles in construction contracts

A contract, when formed by offer and acceptance, is a simple contract and is actionable within 6 years from the cause of action. On the other hand, a contract under seal is actionable within 12 years from the cause of action. In many construction projects, those arranged by consultant quantity surveyors are under seal while domestic sub-contracts are simple contracts. If so there is a discrepancy of limitation and the first tier contractor bears a larger risk exposure with regard to defects (whether latent or known). With the forth-coming abolition of privity of contract as proposed by the Law Reform Commission, contractors and sub-contractors could be sued not just by the developer but also by the ultimate flat owners who are not party to the related construction contracts or sub-contracts!

Construction contracts are often signed and executed a considerable time after work commencement. Such "late" contract is still valid as long as the fundamental terms (among these, tender price must be one) had been agreed by tender submission, letter of intent, etc.

There is always the implied terms that the works are reasonably (not absolutely) fit for purpose and of good merchantable quality. So make sure we comply with such spirit whether we find such wordings in the contract or not.

In case of mistake in a contract, find out if it is common (both parties are wrong) or unilateral (only one party is wrong). For common mistake, the usual remedy is rectification of the mistake to uphold the contract. For non-trivial unilateral mistake, the innocent party may usually choose to void the contract or to rectify the mistake.

Misrepresentation is more serious than mistake. For innocent misrepresentation, the usual result is either rectification or voidable contract. Fraudulent misrepresentation is a criminal offence and must be cautioned.

Time is unlikely to be of the essence in construction contracts (compare against timely payment and delivery in conveyance of property); that is why there are provisions for extension of time, liquidated damages, etc.

When taking out insurance, remember to be in joint names of Employer and Main Contractor; otherwise the policy will only cover events caused by the insured. There are risks due to Act of God not attributable to the insured's negligence.

In real life, a building is sometimes in beneficial occupation by the Employer but the certificate of practical completion is issued at a later date, whether back-dated or not. This could create a vacuum in contractor's all risk insurance coverage – CAR strictly speaking may cover contractors' construction activities only and not cover Employer's beneficial occupation.

Common assumptions in construction contracts

The contract is an "entire" contract – the contractor cannot complete part of the contract works and choose to omit the remaining works; it must complete all the contract works to achieve practical completion.

What is to be constructed is closely defined in nature and extent, even though it may be a measurement contract with approximate quantities or schedule of rates. Thus a building contract will not become road work; a single block contract will not become the construction of 10 blocks.

There is one Main Contractor who controls the site activities and has complete possession of the site until practical completion. That is why in the Dickson Construction saga, despite the slow progress for some considerable time, the government is reluctant to take back the sites or is compelled to take protracted contractual steps to resume the sites.

Correspondingly, the Employer takes a contractually passive role; even this limited presence is usually felt through the Architect and/or Consultants.

Some observations:

Contra proferentem (against the writer) – if the writing is ambiguous, it is the other party (not the author) to decide which interpretation should prevail. So one must write clearly and accurately to reflect the message he wants to convey. The contractor has no duty to positively search for discrepancy in the contract (though most contracts ask the contractor to read say the specification in conjunction with the other documents – schedule of rates, drawings, etc.). This basic legal concept is often trampled by the contract administrator in the wrong belief that the interpretation of the Architect/Engineer is final; the fact is contract is not above the law. Thus beware when a contractor converts contract drawing into shop drawing by simply changing the title block; he assumes all design abnormalities (if any) to be contractor's!

Extraneous documents can only be for reference – so take the prudent step to fill in all blanks in the contract document, including appendices therein.

Instruction cannot vary conditions of contract which will be precedent over others (bill/specification, drawings, etc.). One should not blindly accept any instruction; an instruction could be invalid. It may violate basic construction contract principles; the signatory may not be properly authorized; site representatives are sometimes authorized to issue instruction under a restricted number of contract clauses; and so on.

II. HISTORY AND COMPARISON OF CONTRACT FORMS IN HONG KONG

A Brief History of Contract Forms

In the 1970's and before, Direct Contract (DC) was a very common form used in Hong Kong. This was gradually replaced by Nominated Subcontracts (NSC), which was widely used into the 80's. However the 90's saw the increasing use of Domestic Subcontracts (DSC), and with it increasing controversy over which should be the most appropriate form of sub-contract.

The shift from NSC to DSC is understandable. From the owner's point of view, the privilege of maintaining control over the subcontractors comes with the trouble in dealing with the numerous problems associated with contract management. This privilege therefore comes with a price, and a lot of headaches. As projects become more complex, and the owner's resources are stretched, the headaches become more serious and harder to cure. There is naturally a tendency for the owners to push the problems down the line to the main contractor.

The introduction of DSC by the Architectural Services Department (ASD) was far from smooth. In 1966, when ASD proposed to use DSC for three trial projects, including the Pamela Youde Hospital, there was strong objection from the Electrical and Mechanical Specialist Sub-contractors, so much so that all qualified Specialist Sub-contractors refused to tender for the projects. ASD reacted by qualifying additional Specialist Sub-contractors from outside the existing list and proceeded with the projects. A review was held to evaluate the merits and demerits of DSC for the three projects with the industry, but the results were not conclusive.

Comparison of DSC, NSC, and DC

Twenty years on, it would be interesting to revisit the various dimensions of executing a project under DSC, NSC, and DC forms of contract:

1. Choice of BS Sub-contractor.
   In selecting the BS Sub-contractor, the Owner can have total discretion under DC, a certain degree of discretion under NSC, or leave it entirely to the Main Contractor under DSC. Most main contractors would prefer DSC.

2. Choice of M&E Equipment
As the Owner is most likely to have the users' interests at heart, he is more inclined to consider factors such as reliability, durability, and life-cycle costs, in which case he would have the best control in choice of equipment under DC.

3. Construction Management and Supervision
For the Owner and Main Contractor, the line of control is the clearest and simplest under DSC. Under NSC or DC, the BS Sub-contractor has a line of communication with the Owner, which complicates the situation.

4. Building Services Co-ordination
Generally regarded as one of the most complicated and difficult part of a large building project, the consensus is that BS co-ordination work should be taken up by experienced and knowledgeable experts. While such expertise was only available with BS Sub-contractors, some Main Contractors have established quite capable in-house BS Co-ordination functions over the years. So instead of depending on the form of contract, successful BS co-ordination depends more on the capability of the coordinating party.

5. Program
While advocates of DSC or NSC would tend to claim that their choice of contract arrangement would give a more efficient program, there has not been any conclusive verdict on which is better. Any meaningful analysis would require a fair and equitable comparison. This would necessarily involve at least two similar projects under similar conditions, with one used as a control.

From an Owner's point of view, DSC has the advantage that the Lead Time for tendering and letting out is much shorter, with the Main Contractor taking up all the work related to sub-contracting. However, such work is not saved but just pushed down the line. One therefore has to look at the total project time, from planning/design to completion.

6. Costs
Like Program time, it is difficult to compare the costs of a project under NSC versus DSC, as it would necessarily involve at least two similar projects under similar conditions.
From an Owner's point of view, his direct costs, which usually includes tender preparation and contract management, is lowest with DSC. However, the additional costs related to NSC or DC is just pushed down the line, as the Main Contractor takes up more work.

7. Partnering
In recent years partnering has been advocated as the cure for many problems associated with sub-contracting. However neither the new practice nor the new culture has taken root. Partnering still means different things to different parties. BS Sub-contractors suspect that they could at best serve as junior partners. On the other hand, the BS Sub-contractor's status as a partner seems to rise up the hierarchy with NSC and DC.

8. Dutch Auction
Under DSC arrangement, there are opportunities for the Main Contractor to conduct Dutch Auction among potential BS Sub-contractors. This is damaging to the profitability of the Sub-contractors, which in many cases translate into compromises on quality and safety.

9. Claims
The Owner is dragged into claims from the BS Sub-contractor under DC and NSC arrangements, but in the main stays clear under DSC. The question is whether pushing the problem out of sight actually eliminates the problem.

10. Dispute Resolution
Like claims, DSC pushes the disputes between the Main Contractor and the BS Sub-contractor away from the Owner.

11. Security of Payment
Security of Payment is by far the greatest concern for most BS Sub-contractors. Late payments and unilateral set-offs and withholding of payments have been perennial problems, topped by the occasional default of some Main Contractors. Under DSC arrangements, the Sub-contractor is completely at the mercy of the Main Contractor and have no recourse to the Owner on payment problems.

Other Forms of Contract Arrangements

Design - Build (DB)

Under DB arrangement the Main Contractor becomes the main driver of the Project, with professional services like architecture, consultancy, and quantity surveying under his employ. This arrangement is the simplest for the Owner and requires the least effort on the owner's part. So far DB is only considered for very large and complex projects. Under DB the BS Sub-contractor is almost certain to be a DSC.

Principal Building Services Contractor (PBSC)

This is a relatively new form of arrangement, whereby a BS contractor takes up all the Building Services work. The PBSC may do all the BS work by himself, or sub-contract some parts of it, but he is responsible for the total co-ordination and the final delivery of the BS work.

The PBSC could be under a Direct Contract with the Owner, or a Sub-contractor of the Main Contractor.

Current and Future Developments in Hong Kong

Government, the Building Services Industry, and the Construction Industry at large are aware of the various problems in connection with sub-contracting arrangements, and have continuously tried to tackle such problems. Some milestones are cited to indicate the progress made in recent years:

1. DSC Standard Form of Contract (Blue Form)
   Published by the Hong Kong Construction Association (HKCA) in 1992, it gives a basic framework under which the contractual relationship between the BS Sub-contractor and the Main Contractor is defined. However, the use of this Form is voluntary, and the details are subject to changes, usually initiated by the Main Contractor.

   The Form has been under review and revision by HKCA and Hong Kong Federation of Electrical and Mechanical Contractors (HKFEMC).

2. New NSC Standard Form of Contract
   Published by the Joint Contracts Committee of the Hong Kong Institution of Architects and the Hong Kong Institution of Surveyors, the new NSC Form was made available to the industry in 2006. This form has incorporated a substantial amount of changes, with input from HKCA and HKFEMC, and is an up-to-date and equitable piece of document.

3. The NEC Engineering & Construction Contact
   Some Owners have started adopting this ground breaking piece of document, published in the UK by ICE in simple layman language based on an approach of equitability.

4. Consultations by Employer organizations
   The leading Employer organizations that have spearheaded consultations with industry representatives include the Development Bureau (formerly the Works Bureau and then the Environment, Transport and Works Bureau), the Architectural Services Department, the Housing Authority, and the Mass Transit Corporation.

5. Construction Industry Review Committee (CIRC)
   In 2000, Government initiated an all out effort to review all problems related to the Construction Industry, with a committee headed by Mr. Henry Tang. The ensuing report gave a comprehensive appraisal of the situation and made appropriate recommendations in tackling the problems. Contract arrangements and Security of Payments were among the main problems addressed.

6. PCICB and CIC
   Following the work of the CIRC, the Provisional Construction Industry Co-ordination Board (PCICB) was set up in 2001 to oversee all issues in the industry. In 2007, the Construction Industry Council (CIC), a permanent statutory body, replaces the PCICB. Both bodies are well represented by various stake holders of the Construction industry.

In some areas progress has been made. Examples are efforts by ASD to tighten tendering procedures to prevent the practice of Dutch Auctioning, and in general Government administration procedures that allows BS Sub-contractors to track the payments made to the Main Contractors that are related to BS work.

International trends

There has been a trend, particularly in present of former English Common Law jurisdictions, to introduce Legislation to provide for Security of Payment in the Construction Industry. Countries that have enacted such Legislation include the United Kingdom, Australia, New Zealand, and Singapore.

The main problems that usually plague most contract arrangements are addressed by these countries. They include:

1. The right to receive payment by installments
2. Restrictions to set-off
3. The right to suspension of work for non-payment
4. Invalidity of "Paid-when-paid" or "paid-if-paid" provisions in contracts
5. A right to speedy settlement of disputes by adjudication

The advantage that these countries see is that with better Security of Payment, Main Contractors and Sub-contractors with all benefit, which will translate into more efficiently executed projects and better quality products for Owners.

What holds for the future?

Future developments on Contract Arrangements will be closely linked with the fate and fortune of BS Sub-contractors. The writers find that it is very difficult to predict which way things are going, and can pose their doubts as questions, such as:

- What will be the main stream contract arrangement in Hong Kong?
- Would there be improved Security of Payment?
- Would speedier forms of Dispute Resolution take root?
- Would the BS Sub-contractor have an easier time?

There are winds of change in the air. More stake holders are aware of the high stakes of well executed projects, which hinge on good contract arrangements. With the will to change, interesting developments should be just around the corner.

屋宇裝備業界的合約

（中文譯文）

英國建造業合約形式

英國建築業界重視專業分工，所以每個項目的架構行頭眾多。

當地的Joint Contracts Tribunal (JCT) 由業主、設計顧問、承判商，專業分判商等代表組成，制訂多款建築合約，以供不同種類項目選用。 同時土木工程學會 (ICE) 亦有相類土木工程合約，其中「新工程合約」(New Engineering Contract) 以簡單文字和夥伴精神撰寫，值得一讚。

香港常用合約與英國雷同，各款合約就個別項目的特點及需要，界定業主和承判商之間的風險平衡。

香港建造業合約形式之歷史與比較

從70年代到現在，通用的合約形式，由「直接合約」(DC-Direct Contract)，轉為「指定分包」(NSC-Nominated Sub Contract)，再轉為「自選分包」(DSC-Domestic Sub Contractor)。主因是業主方面希望避免管理各分包商而帶來的麻煩。但當【建築署】在1996年引入「自選分包」(DSC)時曾遭業界的強烈反對。

各類合約形式比較

20年後，讓我們比較一下「自選分包」DSC，「指定分包」NSC及「直接分包」DC。

1. 屋宇設備分判商的選擇

業主可能喜歡「指定分包」NSC讓他們保持某程度之選擇權，但大部份總承判商都寧願採用「自選分包」DSC。

2. 機電器材之選擇

若然業主希望選用耐用及節能的器材，「直接分包」DC會給他們最大的空間。

3. 管理及監督

「自選分包」DSC會給與業主及總承判商最直接及最簡單一對一的架構。

4. 屋宇設備的協調

工程的成功，有賴於有經驗之專業人士擔任協調工作。

5. 工程之進度

至於那一種合約形式能夠令工程最快完成，至今仍未有定論。

6. 工程之成本

那一種合約形式最高成本效益，亦是未有定案。

7. 夥伴關係

要達到總承判商與分包商真正平等及互利，殊不容易。

8. Dutch Auction

「自選分包」DSC的形式，最容易被總承判商利用，於投標後再從新要求各分包商減價。

9. 索償及和解

「自選分包」DSC把問題遠離業主，但未必把問題解決。

10. 收款之保障

保障收款是分包商面對的最大問題，而「自選分包」DSC之保障是最低的。

其他的合約形式，包括“設計及建築”(DB-Design and Build) 及“主要屋宇設備承判商”(PBSC Principle Building Service Contract)。

“設計及建築”(DB)多用於大型工程，並全部採用「自選分包」DSC，而“主要屋宇設備承判商”(PBSC)由一家機電工程商完全負責所有屋宇設備工程，包括協調。

目前及未來的發展

業界近年來在應付合約形式有關的問題，有不少的進度：

1. 「自選分包」DSC標準合約條文
1992年第一版條文的修改工作已差不多完成。

2. 新的「指定分包」NSC 標準合約條文
由【建築師學會】及【測量師學會】合著的新條文已於2006年推出。

3. NEC 合約條文
是英國推出的一套比較簡單的條文。

4. 業主機構的諮詢
包括【發展局】、【建築署】、【房屋署】及【地鐵公司】等。

5. 建造業檢討委員會
於2000年由唐英年主持之檢討工作，提出了一列之提議。

6. 【臨時建造業委員會】(PCICB Provisional Construction Industry Co-ordination Board) 【建造業議會】(CIC)

【建造業議會】(CIC) 繼承【臨時建造業委員會】(PCICB)，將會經常性處理關於建造業的問題。

國際的發展

英國、澳州、紐西蘭及新加坡都已先後立法，管制工程合約，並增加對承建商及分包商付款的保障。

未解決的問題

- 香港將來的主要分包合約，會採取何種形式?
- 付款可以增加保障嗎?
- 合約糾紛可以加速調解嗎?
- 屋宇設備分包商，會有更好的營商環境嗎?