

## 1. OVERVIEW

### (a) Scope of the construction industry

The construction industry is a complex organisation centred on building contractors who are responsible for carrying out the building work. It is notable for its mix of large and small firms involved in several different market areas: new construction work, alterations, repair and demolition of buildings and civil engineering works. The industry also encompasses the on-site assembly and installation of prefabricated integral parts of buildings or works, as well as the installation of fixtures and fittings.

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In Hong Kong, the construction industry is one of the major pillars of the economy. It embraces all the construction activities undertaken within the realm of the main infrastructures and real estate, including new construction, repairing and alterations of any existing structures. It also involves different stakeholders such as real estate developers, professionals, academics, contractors, workers and government officials. Generally speaking, in Hong Kong, construction activities can be broadly divided into three main areas, that is, public housing projects, other public sector works commissioned by the HKSAR government and quasi-government bodies such as the Mass Transit Railway Corporation and private sector development projects. In the private sector, these may be subdivided into separate market segments such that building is composed of housing, industrial and commercial markets. These works are undertaken by a large number of small firms with a small number of large firms competing for the largest projects. This suggests that the construction industry comprises firms who differ in terms of size and scope. Even within firms there is often a great diversity of activity, with different parts of the firms tackling specific sub-markets. This produces the opportunity for constructors to focus their activities or to remain flexible, enabling them to compete in all sectors.

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### (b) Range of human resources required

Given that projects comprise a complex sequence of a large number of inter-dependent tasks it is clear that there is strong demand for a range of human resources. Parties involved in a given project include clients, design consultants (architects, engineers, surveyors, etc) and main contractor and subcontractors, in a wide variety of possible combinations. The industry comprises the contractors' office and supervisory staff and workmen, the architect or the engineer who designs the project work and supervises the erection, the quantity surveyor who is the specialist on measurement and cost, suppliers who supply the building materials, subcontractors who do specialised work and sometimes consultant structural or mechanical engineers who relieve the architect of certain specialised areas of the design. Thus, the construction industry in Hong Kong employs a whole spectrum of professionals, which commonly includes architects, landscape architects,

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engineers, surveyors, project managers, safety officers, construction managers, site agents, builders, planners, mediators, arbitrators, etc.<sup>1</sup>

- 2.004 As is frequently the case on a modern complex project, numerous special types of construction are involved. The contractor who enters into agreement with the employer to construct a project may find that the work can better be accomplished by subcontracting with domestic contractors and specialist contractors to do a portion of the work. Craft skills still play an important part in the overall construction process. Although their significance may have diminished in the face of initiatives to standardise work tasks, their importance has not been removed. Technological innovation has traditionally proved less readily applicable to the construction process than to other industries, and craft-based occupations are still widespread. The importance of the construction workforce is highlighted by the fact that the industry relies on skills, and on the capacity to bring different skills together effectively. Each construction project relies on teamwork and cooperation.

## 2. PROJECT INITIATORS

### (a) Employer / Developer

- 2.005 The level of new orders for construction work is dependent on the state of the economy and on the choices available to the clients both in the public and private sectors. The employer is the organisation or person who commissions the construction project and who pays the cost of the work.
- 2.006 The construction process is always initiated by the employer's recognition of a need or an opportunity for construction. The employer then contracts with design professionals to transform the general concept ultimately into a complete set of plans and specifications for the entire project. It sometimes happens that the employer is uncertain of his requirements and the architect or engineer helps in formulating them.
- 2.007 In building contracts, the employer usually enters into a contract with an architect to plan and design a project to satisfy the employer's particular needs, in coordination with other professionals like engineers and surveyors. The employer participates during the design period to set criteria for design, cost and time limits for completion and to provide decision-making inputs to the architect.

### (b) Project manager

- 2.008 Project management can be a separate professional role dedicated to achieving time, cost and quality performance. Every organisation participating in a project may have its own project manager. Whether in the direct employ of the employer,

<sup>1</sup> For more details on the construction professionals in Hong Kong, please refer to Chapter 29 of MA, *Professional Conduct and Risk Management in Hong Kong* (Hong Kong, 2007).

the design firm or the contractor, project managers are usually the people responsible for the management of all phases of the project for the organisations they represent.

Typical activities of the project manager include project initiation, project scheduling, project start-up, project control, contractual strategies and financial planning. From the initiation of the project, the project manager acts as the key catalyst to stimulate effective communication and coordination between design, procurement and construction activities to ensure that the project is completed within budget, on schedule and meets the technical and construction quality objectives. 2.009

For a design firm, the project manager controls the scheduling, budgeting, cost control, coordination of design and construction and the letting of consultant contracts for the employer and is normally the sole contact with the client as a representative of the design firm. 2.010

For the employer, a project manager is similarly responsible for all phases of a project, but may participate in the selection of a consultant team and is the representative of the employer in connection with any business concerning the project. Where an architectural firm has been engaged for design services only, the employer's project manager will provide construction contract administration and may employ a resident project representative to work under her or his supervision. 2.011

In a contractor's organisation, "project manager" is also a frequently used title. As the title implies, the main contractor's or subcontractor's project manager is in complete charge of the project. The particular responsibilities include coordination of subcontractors, scheduling, cost control, labour relations, purchasing and numerous other functions related to the project. 2.012

Many project managers will be familiar with the wish that clients express to have the highest possible quality of work carried out as soon as possible and at the minimum cost. In reality, they know that these three objectives may not necessarily be simultaneously compatible, and that coming to a compromise trade-offs must be made. It is fairly simple to encapsulate the main responsibilities of a project manager – to complete the project within time, at or under budget cost, in accordance with the required performance and quality levels and also to ensure that none of the major project goals are placed in jeopardy during the execution of the field work. In addition to the functionality of the facilities, a project manager may also consider the aesthetics and safety of the project and its effects on the environment and public welfare. 2.013

## 3. CONSULTANTS

### (a) Project design professionals

The project design team often also plays a pivotal role in the administration of a construction project, with responsibility for contract interpretation, certifications of the contractor's applications for payment, inspection, contract compliance and acceptance 2.014

of the work. For these reasons, proper recognition and allocation of the relative rights and responsibilities of the design professionals are essential to an understanding of the legal relationships that govern a project.

#### (b) Licensing of authorised person

- 2.015 In relation to construction works, the HKSAR Government delegates part of the government's building control functions to statutorily recognised persons, where a professional licensing system involving registration of an experienced building professional called the "Authorised Person"<sup>2</sup> (AP) is implemented. The AP can be an architect, a structural engineer or a surveyor.<sup>3</sup> These building professionals have to pass a professional interview before they can practice as APs.<sup>4</sup>

#### (c) Responsibilities of authorised person

- 2.016 Under the Building Ordinance (Cap 123), property developers who want to carry out property development have to appoint an AP to submit their building proposals to the Building Authority for approval. The appointed AP shall supervise the carrying out of the building works, notify the Building Authority of any contravention of the regulations that would result from the carrying out of any work shown in any approved plan and comply with the provisions of the Ordinance. Upon completion of the building works, the AP has to endorse compliance with the Ordinance on a certificate prepared by the registered contractor to apply for an occupation permit. To assist the AP in exercising the above functions, the Building Authority issues practice guidelines called Practice Notes for Authorised Person (PNAP) with the up-to-date technical and administrative information.<sup>5</sup>

#### (d) Architect

- 2.017 The architect is often regarded as the leader and coordinator of the building project<sup>6</sup> and is concerned with a diversity of matters for which support from the other members of the design team is needed. The architect receives the commission to design, supervise the erection of the building and is empowered by the employer to issue additional work and variations to such work. It is the architect's responsibility to ensure that all the design decisions fit together to describe a building that is

<sup>2</sup> Section 3(1) and (2) of the Buildings Ordinance (Cap 123).

<sup>3</sup> The register of "authorised persons" is actually separated into three lists. Disciplinary proceedings are provided for in s 7 of the Buildings Ordinance (Cap 123). The Buildings Ordinance also provides, for example, for a "registered structural engineer", a "registered geotechnical engineer" or a "registered inspector" with likewise disciplinary procedures.

<sup>4</sup> Registration is regulated by s 3(5) to (13) of the Buildings Ordinance (Cap 123).

<sup>5</sup> For details, please refer to the website of the Hong Kong Buildings Department at [http://www.bd.gov.hk/english/documents/index\\_pnap.html](http://www.bd.gov.hk/english/documents/index_pnap.html) viewed 1 Jun 2013.

<sup>6</sup> See *R v Architects' Registration Tribunal, Ex parte Jaggard* [1945] 2 All ER 131. In engineering projects, this function may instead be discharged by a civil engineer.

visually satisfying and works properly.<sup>7</sup> The task is made particularly onerous by the close interaction of the work of architects, structural engineers, building services engineers and other team members.

The typical architectural organisation that would be involved in a major project is likely to be run by a top-level team comprised of the conceptual designer who creates the overall image of the building, a senior designer who deals with the design issues which arise in the day-to-day running of the project and a technical coordinator who keeps track of the status of all the drawings to ensure that changes are communicated to everyone involved. The technical coordinator also deals with the local authorities, such as the Buildings Department and Water Supplies Department whose approval is needed before certain work can be carried out, as well as handles any statutory undertakings. Finally, the technical coordinator ensures that the design architect's concepts are translated into practical details for the specialist contractors who will actually build each detail of the building.

#### (e) Structural engineer/building services engineer

Usually there will be several consultant engineers employed on the same building project, each specialising in their own particular fields, who are coordinated by the architect. Although the architect is responsible for the overall performance and appearance of the building, it is the structural engineer who ensures that it forms a safe and efficient structure. The structural stability of buildings is essential for them to function properly.

The structural engineer receives the proposed design drawings of the building project from the architect. He must then work with the architect's conceptual designs and ensure that the overall size and shape of the building and the choice of materials and the way these materials are joined together can withstand the expected forces. These forces include wind pressure, movements due to changes in temperature, the weight of the building itself and, most unpredictable of all, the loads imposed by the users and all the furniture, equipment and other effects they may bring with them. The structural engineer must design a structure that accommodates all these forces and fits in with the architect's overall concept. Structural engineers may also be asked to prepare a preliminary programme, method statements, temporary work designs and site-layout drawings.

Likewise, building services engineers are brought in to handle the electrical and mechanical works, such as lift systems, fire services installations, water pumps, etc.

Frequently, in building projects, the architectural firm is primarily responsible for the design and the contract documents. It, in turn, subcontracts responsibility to independent mechanical, electrical, structural and plumbing engineers or other consultants. On the other hand, many design firms in Hong Kong provide both architectural and engineering services.

<sup>7</sup> Section 4 of the Buildings Ordinance (Cap 123).

## 1. INTRODUCTION

### (a) Composition of project teams

Most construction projects are set up with two distinct teams: the design team and the construction team. The design team is usually headed by the architect in building projects and the civil engineer in engineering projects as prime consultant and includes various other consultants such as the quantity surveyor, who maintains financial management during construction and a structural engineer, who designs a structure that can accommodate all forces imposed on the building. The construction team is often headed by a main contractor, who in turn subcontracts much of the work to directly employed domestic subcontractors and also nominated subcontractors as directed by the employer. In fact, the current trend is to tailor arrangements to fit each project. The organisation of the team can take different forms, and each of them may have a significant effect on the liabilities and responsibilities of the parties. **3.001**

### (b) Overview of procurement

In Hong Kong, there are three main procurement paths, namely traditional general contracting, design and build and management contracting.<sup>1</sup> In fact, most construction work is currently carried out under the system of traditional general contracting. Construction industry professionals are familiar with this structure and the roles of the parties under it. Under the traditional structure, design and construction proceed sequentially, with construction commencing only after the design is complete. However, waiting for a complete design before starting any construction may expose the employer to inflation and delayed occupancy. Waiting that length of time also denies the employer the ability to react quickly to changing market conditions and immediate needs. **3.002**

Since the last few decades, the construction industry has experienced significant changes in the way in which contracts are managed. Certainly new procurement methods, such as design and build and management contracting have imposed changes on the way professionals organise their practices. Each procurement option will have a different time, cost and quality implication. Altering any one element will have an effect on the others. The particular circumstances of each project may result in different procurement routes to best satisfy the priorities of time, cost and quality. **3.003**

The criteria for selecting a procurement method for a project will be drawn from the client's brief. **3.004**

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<sup>1</sup> Hong Kong is relatively still at an early stage in its adoption of Public Private Partnerships (PPP). Popular forms of PPPs include Build-Operate-Transfer (BOT), Build-Own-Operate, Buy-Build-Operate, Design-Build-Finance-Operate (also known as Private Finance Initiative (PFI)) and Design-Build-Operate. Only the BOT approach has been adopted in the development of a few major infrastructures. For the more modern approach to public procurement, see the UNCITRAL Model Law on Public Procurement 2011, which allows government purchasers to take advantage of modern commercial techniques, such as e-procurement and framework agreements, to allow it to maximize value for money in procurement.

## 2. METHODS OF PROCUREMENT

### (a) Factors affecting choice of arrangement

**3.005** The selection of an appropriate procurement system depends largely on the accurate identification of client requirements. Any emphasis placed on quality, time, cost and other objectives must be clearly sought from clients at the outset for a project to be fully successful. For instance, the procurement selection chart devised by the National Economic Development Office (NEDO)<sup>2</sup> sets out eight assessment criteria namely timing, controllable variation, complexity, level of quality, price certainty, competition, division of responsibility, professional responsibility and risk avoidance. Dispute resolution is also listed as criteria to consider. It is a central responsibility of the project managers to ensure that the system chosen provides the best fit to the brief and the circumstances of the project. Depending on the situation, the factors that influence the choice of appropriate contractual arrangement include:

1. size, nature and complexity of development;
2. dates for commencement and completion;
3. degree of quality and performance required;
4. aesthetics requirements;
5. ability to define the client's requirements clearly before contract;
6. adequacy of construction information on which to establish client's cost limit;
7. availability of valid and adequate construction information on which to obtain tenders;
8. the scale of changes the client is likely to effect during the construction phase.

### (b) Traditional general contracting

**3.006** This tends to be the default procurement method where design is a separate function from construction. Under this structure, the party that carries out the work is the main contractor. The employer and the main contractor are the two parties to the main contract. Professional services, including design, cost advice, etc, are provided by other persons. They are not parties to the main contract and their relationship is by separate contract with the employer.

**3.007** The consultant's role is viewed as an independent one. The consultant converts the employer's requirements first into a brief and subsequently into a workable design. The task of supervising the construction is usually carried out by the architect. A main

<sup>2</sup> NEDO, Thinking About Building (HMSO, 1985).

contractor is employed to undertake the details of the project as specified by the designers. This means that the contractor is not liable for the design, but only for workmanship. The contractor is responsible for the performance of every party on site, whether subcontractors are directly employed by the contractor or are nominated subcontractors selected by the employer.

The traditional structure for project procurement is considered a sequential method because the employer takes the scheme to an advanced stage with his professional team, before appointing a contractor. Because of this, critics of the traditional method argue that with the 'end on' design-build arrangement the overall project period is long and consequently the cost is greater, eg due to the need to finance the purchase of the land. There is also the time lost to the client in occupying or letting the premises, and the income that would be generated. Under the traditional method an 'us and them' attitude tends to develop between designers and contractors, which is not conducive to the smooth running of a contract.

All drawings have to be fully prepared before tendering, which puts less pressure on the designers. The result is normally a more aesthetically pleasing design with most of the technical complexities resolved. Also under this method, building cost is usually quite accurate and variations can be easily calculated. Separating responsibilities for design and construction is seen as the main reason to switch to alternative contractual arrangements.

### (c) Design and build

These contracts work on the principle that the contractor offers a package-deal service,<sup>3</sup> which simplifies the contractual links between the parties to the main contract because the contractor is responsible for undertaking the design work outlined in the contractor's proposal, constructing the building and coordinating and integrating the entire process. Contractors may commission design and cost services from outside consultants, or they can employ the design team from within their own organisation. It is believed that this allows contractors to offer a better deal, as they are in control of all aspects of the project. It also reduces conflict between the parties by having the 'single point of responsibility' to the employer. All the risk is therefore transferred to the design and build contractor and thus it is not necessary to distinguish the difference between a design fault and a workmanship fault.

In tender stage, the employer obtains competition in price as well as design. It is very important that the brief is concise and unambiguous from an early stage. Since the contractor is undertaking the design work, there are opportunities to overlap the design and construction processes and thus to make an early start on site. Since the contractor retains full control of design, features that are impractical or awkward to carry out on site can be rejected. Inherently more buildable designs, familiarity with his system and an overlap of design and construction phases lead to early completion. Implementation of changes is simplified throughout the construction

<sup>3</sup> There are a number of variants of design and build contracting, including just design and build (D&B); design, build and operate (DBO); and design, build, operate and maintain (DBOM).

programme. As contractors must design to a budget, a client is certain of the necessary financial commitment from the start. However, contractors may offer a functional design that is not aesthetically appealing. They are inclined to develop a low-cost design with opportunities to increase their margins. Contractors might make a client's brief fit their own preferred solution and thus the long-term life of a building might be overlooked, and if the brief is vague, the client could pay an inflated price or take possession of an inferior building. In fact, clients always find that it is necessary to employ consultants to monitor the various aspects of the work and to ensure that the work of the contractor is of an acceptable standard. In addition, tender comparison becomes complex as it involves evaluation of design, quality and construction cost. The cost of abortive designs and tendering is a heavy burden on contractors' overheads and eventually the costs will be passed on to clients.

- 3.012 One variation of the concept is the 'develop and construct' method, where the builder bids on the basis of outline drawings and the performance specification provided by the client. The successful builder is then responsible for developing the initial design and the subsequent building work. Another variation is the turnkey method, where the builder provides the client with a fully designed building, including all the necessary plant and equipment for immediate use.

#### (d) Management contracting

- 3.013 This is the separation of management from construction in the form of management contracting for a fee, but the fee can often be varied if the time or cost performance of the project differs significantly from the initial plan and budget. In management contracting, the employer has a direct contract with the management contractor. The contractor is solely providing management services and is normally excluded from undertaking construction work. The contractor is responsible for the smooth running of the work on site so that the contract can be finished within time and cost expectations. The combination of size and complexity of a project will result in the need for a management contract.
- 3.014 Under this system, the project team is provided with access to an experienced contractor at an early stage. The consultants prepare the drawings, specifications and bills of quantities for the various works contracts. From the project's outset, the management contractor becomes part of the project team, working together to achieve a client's project objectives of time, cost and quality. It also enables the contractor to advise on quality, buildability, suitability, availability of labour, plant and materials and construction methods during the design phase.
- 3.015 During construction, the management contractor's duties include placing and letting contracts with specialists, setting out, providing shared facilities, planning and monitoring the work and coordinating all the activities on site, but not carrying out the permanent works. Early appointments of management contractors enable them to give information on the organisation of construction works, the site layout, possible works contractors and tendering arrangements. Such projects are progressed by the letting out of the project to works contractors on a number of

separately tendered work packages. This system allows the design of each package to be completed whilst building work continues on site for the earlier designed packages. Due to this parallel working, the project completion period is reduced. Each package of work is undertaken by a specialist, who will be competitive for that part of the works, resulting in a lower price. The integration of the contractor into the design/construction team helps to remove the 'us and them' friction. All works are competitively tendered for the work packages, but the client will not know the final project cost until the last package is ordered, unless a guaranteed maximum price is given.

One development under this system has been to combine the design and build and management contracting, namely 'design and manage' whereby the contractor produces a design and guaranteed maximum price and the work is later assigned to a number of major package contractors.

#### (e) Construction management

There are many similarities between management contracting and construction management. The feature that distinguishes construction management most clearly from management contracting is that the employer contracts directly with each of the specialist and work contractors, and the coordinator of the construction work has no contractual responsibility for their performance. The specialist construction manager has emerged as the manager of a large number of technical people in the design, programme and construction of a building became less of an architectural issue, and more of a management issue. The most suitable situation in which to adopt construction management is when all design activities have been delegated to consultants, then the problem of coordination ceases to be a design problem and becomes a pure management problem.

This requires the responsibility of design and management to be separated. A construction manager performs the role of construction consultant while the architect is the design consultant. The construction manager manages and supervises the overall process in terms of information flow and coordination, providing advice on fabrication and assembly, while design coordination remains the responsibility of the architect. The obligations as to time are entirely related to the construction manager's programme. This means that an employer who wants speedy progress should appoint a construction manager who has proven experience of being able to complete projects quickly. However, in the absence of a main contractor, the employer must take on some of the risks.

### 3. TYPES OF CONTRACTS

#### (a) Based on payment method

The basis of the tender will dictate the way in which the contractor will be paid and the relative risk of the project. There are three fundamentally different types of contract in normal use. In practice, the contractor's bid will be one of the following.

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(b) Termination of offer .....	11.076
(c) Mistake in tender .....	11.077
6. Letter of Intent .....	11.078
(a) Effect of letter of intent .....	11.078
(b) Interpretation of obligations .....	11.083
(c) Condition precedent .....	11.086
7. Price .....	11.087
(a) Fixing the price .....	11.087
(b) Implied term of reasonable rates .....	11.088
(c) Pricing schemes .....	11.089
(d) Lump sum/fixed price contracts .....	11.091
(e) 'Without quantities' .....	11.094
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(h) Non-traditional contract forms .....	11.103
(i) 'Turnkey' or 'design-build' contracts .....	11.104
(ii) 'Management' contracts .....	11.107
(i) Adjustments to price .....	11.108
(j) Index-based price adjustment .....	11.110
(k) Adjusting price by provisional sum of prime cost .....	11.114

## 1. THE PROCUREMENT PROCESS

### (a) Avoidance of dispute

Many potential disputes and claims can be avoided if sufficient planning and precaution is put into the pre-contract process. With the complexities and technical nature involved in construction projects, such disputes and claims may already be locked in once the contract is entered into if the procurement process has not been prudently carried out. It is then left only as a matter of when and how such disputes surface as the construction work goes along. **11.001**

### (b) Tender or negotiation approach

There are two basic approaches to the conclusion of a construction contract. Under the first approach, the employer invites tenders, or bids, from contractors to construct the works and the contract is concluded on the basis of the tender selected by the employer through formal tender procedures; under the second approach, the employer negotiates the contract with the selected contractor, without going through formal tender procedures. Particularly for some government agencies or public entities, the employer may not have complete freedom of choice with respect to the approach to be used in concluding the contract in that procurement laws and regulations in place will often impose limitations. **11.002**

Negotiation of construction contracts with one or more potential contractors may avoid the need to adopt the formalities of the tender procedures. This negotiation approach may be used when the tender approach is not mandatory, particularly in the private sectors or works for domestic subcontractors. This approach may also be appropriate where the works in issue are of a special nature and can only be carried out by limited number of contractors. **11.003**

### (c) Open versus limited tender system

As for tendering, it can either take place through an open or a limited tendering system. For an open tendering system, all interested contractors are invited to submit tenders for the works, thereby promoting more competition among the tenderers. This system may also be the more formal, time consuming and costly type of procedure that leads to the conclusion of construction contracts. In the limited tendering system, only certain contractors are invited to submit tenders for the works. This provides some competition among the tenderers, though to a lesser degree than that in an open tendering system. **11.004**

### (d) Rationale for the tendering process

The rationale for tendering is that it replaces negotiation with competition. This competitive process is heavily weighted in favour of the employer and requires investment by each tenderer. The main aim of the system, however, is destroyed if the **11.005**

employer is at liberty to circumscribe the rules regulating the conduct of the tender process by accepting an invalid bid.

#### (e) Pre-qualification

- 11.006** Whether in open or limited tendering system, tenders may further be restricted to those that have been qualified by the employer pursuant to its pre-qualification procedures. The purpose of pre-qualification is to eliminate at the outset those potential contractors that would not be suitable. This seeks to narrow down the number of tenders that need to be considered, but maintains the standard of the tenders by managing who may submit a tender. In order to be pre-qualified, a contractor may be required to fulfill the capacity requirements for the performance of the contract. These capacity requirements are usually assessed by considering the contractor's experience and past record of performance; its ability to supply the necessary technology; equipment, materials and services; its financial status and existing contracts in hand; and its capacity to meet the employer's other requirements, such as those in relation to safety or employment of legal labour.
- 11.007** In some government agencies, the pre-qualification process is effected by way of a list system, whereby contractors assessed to be qualified to submit a tender for a particular type or scale of works are managed by including them on various lists. Tenders are then invited from those contractors who validly remain on the concerned list or lists, normally by the tender closing date.

#### (f) Stages in the tendering

- 11.008** In tendering, the normal stages involved apart from pre-qualification are the preparation of the tender, an invitation to tender, submission of the tenders, opening of the tenders, assessment of the tenders and acceptance of a tender. The tender documents to be provided to prospective tenderers may consist of the following: instructions to tenderers, the form of tender, conditions of contracts, technical specifications and drawings. The purpose of the instructions to tenderers is to provide guidance for the preparation of tenders and to convey information on matters relating to the evaluation of tenders. The form of tender may call for the offer of the tenderer to construct the works, as expressed in the tender, and to conform to the conditions of contract, technical specifications and drawings and may also require the consent of the tenderer to be bound by the instructions to tenderers. Also, the form of tender may require the tenderer to set out in detail all matters in respect of its offer, such as the programme of the works or the price fluctuation factors. The conditions of contract set out the general contractual terms adopted by the employer and are usually expressed by a combination of standard conditions of contract and the special conditions of contract. As to the detailed requirements of the works, these are commonly communicated by way of specifications and drawings.

#### (g) Evaluation of the tenders

- 11.009** After tenders are received, they are subject to evaluation by the employer. The purpose of such evaluation is to compare the submitted tenders in order to identify the one that

most closely complies with the employer's requirements. For projects in the public sector, there may be mandatory rules or laws applicable that govern the criteria for evaluating tenders. In evaluating tenders, the tender price need not necessarily be the most important criterion in choosing among the tenderers and the employer may need to seek clarification from a tenderer during the evaluation period. The employer may also hold discussions with the most acceptable tenderer in order to consider any deviations in the tender from the employer's design or specifications, or alternatives in the tender.

#### (h) Combining tendering and negotiation

In practice, an approach combining tendering and negotiations may instead be adopted. Such a practice is more common in the conclusion of subcontracts or contracts for non-public works. This, for example, is effected, after receiving tenders submitted from invited contractors, by negotiating with some or all of the acceptable tenderers. However, special care must be taken in any post-tender negotiations, particularly where public entities are concerned. Any such discussions with tenderers, in particular on prices, may distort competition and should be held only for the purpose of clarifying or supplementing the content of their tenders or requirements of the contracting entities.

#### (i) Acceptance of a tender

Acceptance of a tender is commonly effected by a letter from the employer. This letter may be termed a letter of intent or simply a letter of acceptance. This normally forms the basis of the legal relationship between the employer and the contractor, until the formal execution of the contract. However, the exact legal effects created by this letter can differ substantially depending upon its wording and as such, have to be examined in light of all the circumstances in each case.

## 2. LEGAL ASPECTS OF PUBLIC PROCUREMENT

### (a) Principles of government procurement

Procurement of construction works and services by the Hong Kong SAR Government and other public agencies represents an important share of the total public spending and, thus, has a significant role in domestic economies.

Government procurement in Hong Kong is based on the following principles: public accountability, value for money, transparency and open and fair competition. In Hong Kong, most Government procurement of goods and services is handled by the Government Supplies Department, which is the central procurement agency. The Government procurement process is governed by the Stores and Procurement Regulations issued by the Financial Secretary under the Public Finance Ordinance

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(Cap 2).<sup>1</sup> These Regulations are supplemented by Financial Circulars issued by the Secretary for Financial Services and the Treasury from time to time. The Stores and Procurement Regulations cover all stores purchased or acquired on behalf of the Government, excluding land and buildings, as well as services performed by contractors for and on behalf of the Government, including construction and engineering works. As to construction services, they are mainly procured by the individual works departments, under the general supervision of the Development Bureau. Contracts are awarded by various tender boards (for example, the Public Works Tender Board is responsible for works and related contracts below HK\$30 million; tenders exceeding that limit are submitted to the Central Tender Board). Construction services are also procured directly through other public entities such as the Housing Authority. Unsuccessful tenderers can ask for the reasons their tenders were rejected. Further, any tenderer who feels aggrieved may lodge a complaint directly with the procuring entities or to the relevant tender board, the Independent Commission Against Corruption, or even the Office of the Ombudsman, who is empowered to investigate a complaint concerning the procedures adopted in invitation of tenders, in determining the qualifications of the persons who submitted tenders and the selection of the successful tenderer.

**11.014** Moreover, an application for judicial review in accordance with the Rules of the High Court can also be made to challenge any such decisions. Obviously, unsuccessful tenderers may also seek to obtain the grant of relief from the court against public entities under private law, for example for breach of statutory duty or breach of contract, including declaratory or injunctive relief. In the Australian case of *Streamline Travel Service Pty Ltd v Sydney City Council*,<sup>2</sup> on the basis of breach of the local tendering ordinances and contractual obligations resulting from the tendering process, the unsuccessful tenderers challenged the validity of the council's decision to accept the offer of a tenderer who had been short-listed for further negotiations with the council after the close of tenders and successfully obtained an injunction, albeit that under the circumstances of this case no tendering contract was found by the court.<sup>3</sup>

**11.015** Challenges to decisions on public procurement may be effected by way of an injunction against the continuation of a procurement exercise<sup>4</sup> or a declaration.<sup>5</sup>

<sup>1</sup> Though Hong Kong is not a sovereign state, it enjoys a high degree of autonomy. Under Art 106 of the Basic Law, the Hong Kong SAR shall have independent finances. In respect of financial matters, the Hong Kong SAR is its own sovereign. Article 110 of the Basic Law provides that the monetary and financial systems of the Hong Kong SAR shall be prescribed by law. Accordingly, the Public Finance Ordinance (Cap 2) provides the statutory framework for the control and management of the public finances of the Hong Kong SAR. Pursuant to Pt III of the Public Finance Ordinance, the Financial Secretary has made certain administrative regulations, including the Stores and Procurement Regulations, which cover all stores purchased or acquired on behalf of the Government of the Hong Kong SAR, as well as services performed by contractors for and on behalf of the Government of the Hong Kong SAR, including construction and engineering works. See *Secretary for Justice v Penta-Ocean Construction Co Ltd* [2004] HKEC 215.

<sup>2</sup> (1981) 46 LGRA 168.

<sup>3</sup> See *Hunter Brothers v Brisbane City Council* [1984] 1 Qd R 328 but contrast *Maxwell Contracting v Gold Coast City Council* [1983] 2 Qd R 533.

<sup>4</sup> See *Lowry Brothers Ltd v Northern Ireland Water Ltd* [2013] NIQB 23, *Amey LG Ltd v Scottish Ministers* [2012] CSOH 181, *B2Net Ltd v HM Treasury* (2010) 128 Con LR 53 and *Morrison Facilities Services Ltd v Norwich City Council* [2010] EWHC 487 (Ch).

<sup>5</sup> See *European Commission v Ireland (C-456/08)* [2010] PTSR 1403.

### (b) Judicial review

In the context of challenge under public law, judicial review provides the means by which judicial control of administrative action is exercised. It is the process by which the Court exercises its supervisory jurisdiction over the proceedings and decisions of government entities or statutory bodies, who are vested with quasi-judicial functions or who carry out public acts or duties. Yet, judicial review is concerned with reviewing the decision-making process itself, rather than the merits of the decision in respect of which the application for judicial review is made. There are detailed conditions and procedures with which an application for judicial review has to comply for it to be validly made. The substantive grounds for intervention are fluid and overlap, yet the most favoured classifications of grounds for intervention are: illegality, irrationality and procedural impropriety.

For instance, in *R v Portsmouth City Council, Ex parte Coles*,<sup>6</sup> the lowest ranked tenderers successfully challenged through a judicial review the council's decision to award contracts for building repair and maintenance works, which were contrary to the requirements in the Public Works Contracts Regulations 1991 made under the European Communities Act 1972; in *R v Enfield London Borough Council Ex parte TF Unwin (Roydon) Ltd*,<sup>7</sup> it was held that, in removing a contractor from the approved list, the council was obliged to give reasons for such a decision. The situation may be the same even the decision on the award of the contract came from the high authority of the Government. In *CO Williams Construction Ltd v Blackman*,<sup>8</sup> the contract was awarded to a rival tenderer by the Barbados cabinet on the recommendation of the Minister of Transport. On application of a tenderer who put in a lower bid, the court held that continuation of the proceedings was justified. In *Harmon CFEM Facades (UK) Ltd v Corporate Officer of the House of Commons*,<sup>9</sup> it was held that damages for the cost of the tender and any margin could be recovered for a tender stated to be assessed based on 'value for money', rather than 'lowest price' or 'the most economically advantageous' as required by public procurement law. In *Montpellier Estates Ltd v Leeds City Council*,<sup>10</sup> it was held that the city council had been entitled to abandon a competitive tendering exercise for the development of an arena in the city centre in favour of developing the arena itself, despite the previous assertions about not wanting to do so.

### (c) WTO Agreement on Government Procurement

From the international perspective, the World Trade Organisation (WTO) Agreement on Government Procurement is an international treaty to which Hong Kong is a party. It was first negotiated during the WTO Tokyo Round negotiations in 1980 and entered into force on 1 January 1981. Its objective is to allow international competition

<sup>6</sup> (1996) 59 Con LR 114 and *R v Tower Hamlets LBC Ex p Luck (t/a G Luck Arboricultural and Horticultural Services)* (1999) 15 Con LJ 235.

<sup>7</sup> (1989) 46 BLR 1. See *R v Derbyshire County Council Ex p Noble* [1990] ICR 808.

<sup>8</sup> [1995] 1 WLR 102.

<sup>9</sup> (1999) 67 Con LR 1.

<sup>10</sup> [2013] EWHC 166 (QB).

over the business of government procurement as much as possible. Its design is to enhance transparency of the laws, regulations, procedures and practices in government procurement and to safeguard against domestic protection or foreign discrimination.

- 11.019 The present agreement took effect on 1 January 1996 and was reached in the WTO Uruguay Round negotiations in 1994. Its coverage extends to services (including construction services), procurement at a sub-central level and procurement by public utilities. The cornerstone of it is non-discrimination and it calls for “no less favourable” treatment of products, services and suppliers of any party to the agreement than that given to domestic products, services and suppliers. Furthermore, each party is required to ensure that its entities do not treat a locally established supplier less favourably than another locally established supplier on the basis of degree of foreign affiliation or ownership and do not discriminate against a locally established supplier on the basis of country of production of the good or service being supplied.
- 11.020 In the WTO Agreement on Government Procurement, Art X deals with the selection procedures and provides that:
- “[t]o ensure optimum effective international competition under selective tendering procedures, entities shall, for each intended procurement, invite tenders from the maximum number of domestic suppliers and suppliers of other Parties, consistent with the efficient operation of the procurement system”.
- 11.021 Article XX sets out the requirement to install proper challenge procedures and requires that:
- “[c]hallenges shall be heard by a court or by an impartial and independent review body with no interest in the outcome of the procurement and the members of which are secure from external influence during the term of appointment”.
- 11.022 Hong Kong acceded to the WTO Agreement on Government Procurement on 20 May 1997, which took effect for Hong Kong on 19 June 1997. However, its provisions are still not part of the domestic legislation in Hong Kong. To what extent decisions over tenders concerning such public procurement are impacted by the Agreement on Government Procurement is highlighted in the case of *Ngo Kee Construction Co Ltd v Hong Kong Housing Authority*.<sup>11</sup>
- 11.023 This case concerns an unprecedented short piling scandal in Hong Kong. In this case, the piled foundations for two public housing blocks had serious defects and these were discovered by the Housing Authority in 1999. Such defects led to the complete demolition of the blocks, upon recommendation of the consultants appointed by the Authority to investigate the matter. The Authority also set up a panel, as recommended by the consultants, to investigate the matter and the panel reported, inter alia, that no further contracts should be awarded to the parties responsible for the problem or to members of the same corporate group, or any other contracting companies with the

<sup>11</sup> [2001] 1 HKC 493.

same directors in common with the group. The piled foundation was performed by a member of a group of companies that specialised in civil engineering projects. The applicant was a member of the same group of companies but specialised in building works and was one of the approved contractors on various lists maintained by the Authority. In 2000, the Authority announced that the applicant was suspended from tendering for all the Authority’s projects for 24 months and that such a suspension would be lifted subject to review and approval after that period. The applicant sought judicial review of the decision to suspend it from tendering and relied on, inter alia, the WTO Agreement on Government Procurement.

In dismissing the application and rejecting the argument that the decision was amendable by judicial review, Cheung J found that the decision to suspend an approved contractor from tendering for contracts was a commercial decision but he also went on to consider the impact of the WTO Agreement on Government Procurement. In his judgement, he noted that a treaty was not part of the domestic law until and unless it was incorporated into the law by legislation and individuals could not derive rights from a treaty but accepted that the ratification of a treaty was an adequate foundation for a legitimate expectation, in the absence of contrary statutory or executive indications, that administrative decision-makers would act in conformity with the international treaty. However, in the present case, Cheung J found that the applicant was not assisted by it at all as to whether the decision to suspend was a public decision.

In *E Bon Building Materials Co Ltd v Hong Kong Housing Authority*,<sup>12</sup> a supplier, who was removed from the Authority’s supply of building material list, applied for judicial review. Applying *Matteograssi SpA v Airport Authority*, the court dismissed the application.

#### (d) Doctrine of legitimate expectation

Thus, it seems that the door is open for the WTO Agreement on Government Procurement to be invoked in a proper case concerning public decision by way of the doctrine of legitimate expectation in judicial review. In *Ng Siu Tung and Others v Director of Immigration*,<sup>13</sup> it was affirmed that the doctrine of legitimate expectation formed part of the administrative law of Hong Kong and that, under this doctrine, where official conduct has generated a legitimate expectation of a substantive benefit, an administrative decision based on government policy which frustrated the expectation may be reviewed on wider grounds, in particular substantive unfairness and abuse of process. In the Court of Final Appeal judgment, it was held that this doctrine had four components: first, a legitimate expectation arose from a promise or representation, the expectation being that the promise or representation would be honoured, ought to be properly taken into account in the decision-making process, so long as to do so was within the power of the decision-maker; second, unless there were reasons recognised by law for not giving effect to legitimate expectations, then effect should be

<sup>12</sup> [2004] HKEC 1251.

<sup>13</sup> (2002) 5 HKCFAR 1. See also *Shiu Wing Steel Ltd v Director Of Environmental Protection* (2006) 9 HKCFAR 478. See also *Chinluck Properties Ltd v Appeal Tribunal (Buildings)* [2012] HKEC 1441.

4. Maintenance and Certificate .....	17.069
(a) Scope of maintenance period .....	17.069
(b) Whether the certificate is considered conclusive as to acceptance .....	17.070
5. Temporary Work and Permanent Work .....	17.074
(a) Definition of temporary works .....	17.074
(b) Contractor responsible for the design of temporary works .....	17.076
(c) Impossibility .....	17.078
(d) Doctrine of frustration .....	17.083
(e) Unexpected difficulty no excuse for non-performance .....	17.085
6. Damages for Defective Works and Outstanding Works .....	17.087
(a) Cost of repair .....	17.087
(b) The employer has a duty to mitigate loss .....	17.089
(c) The employer is entitled to recoup additional costs .....	17.090

## 1. QUALITY IN CONSTRUCTION CONTRACTS

### (a) Growing importance of quality standards

As with counterparts in other jurisdictions, standard form construction contracts in Hong Kong contain express and detailed provisions dealing with the subject of quality and workmanship on the part of the contractors. Those provisions set out the standard of quality and of workmanship with which contractors are expected to comply in discharging their functions. Due to the nature of construction activities, the standard can be both scientific – in that it is expressed with reference to accepted specifications and criteria as to the output, and also empirical – in that it is expressed with reference to the satisfaction of the engineer or the architect or to the mode of performance rather than the outcome of such performance. Since the total quality revolution in the mid 1990s in Hong Kong, there has been a growing impact of quality management systems, which are almost mandatory for every contract for public works, disputes and their resolutions in respect of construction contracts. Those involved in the execution and administration of construction contracts will agree that, given the inherent features and the developing trend, the question of quality is becoming a more and more complicated subject. There is also growing emphasis on integrated project success, to be measured by objective performance indicators rather than subjective judgement.

17.001

Also, the focus and expectation of quality in commercial sectors in general and in construction contracts in particular are shifting. Quality and indeed the overall successful performance of construction contracts as a whole are of increasing importance and the emphasis placed on customer service and customer satisfaction that lies at the heart of the total quality management and ISO 9000 movement has also altered the landscape and the balance that has traditionally been placed on other determinants of project success, such as time and costs. A whole branch of quality professionals has evolved. The focus of quality management has shifted from testing and inspection to an objective system for the assurance and delivery of performance as a whole.

17.002

### (b) Principles of quality management systems

Nowadays, the contemporaneous meaning of quality<sup>1</sup> is capable of affecting the obligations of the contractor in regard to defective work and the corresponding knowledge of the employer regarding this liability. All of these need to be examined in the context of the quality management system that is put into operation. The essence of quality management, as embraced in the ISO 9000 systems nowadays, is embodied in three principles. First, quality management systems call for a focus on achieving customer satisfaction. For this, the needs and satisfaction level of customers must be assessed and repeatedly reassessed. Customers here embrace a wide definition and include those external to an organisation as well as those within the organisation. Second, there is a need for continuous process improvement; this is in the form of

17.003

<sup>1</sup> For details, see the website of the Chartered Quality Institute at <http://www.theccqi.org>.

several steps, ie conducting process analysis, targeting specific processes that need improvement, establishing performance improvement indicators and monitoring the schedule for and the effectiveness of improvement. Third, there is a need for steps that ensure full involvement of the work force in implementing the quality management system installed. Another feature that quality management systems bring to construction contracts is the generation and maintenance of contemporaneous written records. In resolution of construction disputes, whether by way of litigation, arbitration or mediation, it is common experience that contemporaneous records of the subject matter are of much greater force and value. The operation of quality management systems requires the documentation of all processes that affect the delivery of quality and of records that such processes were carried out as planned. Thus, depending on the subject matter of a dispute, these quality records can become a valuable source of information and evidence that can help to resolve the dispute.

- 17.004** The concept of quality has evolved to a stage that is very far away from where it once was. In relation to quality, the world is no longer what it used to be. Although ISO 9000 is an international standard, it is derived from a British Standard and its use was and is more widespread in the United Kingdom than elsewhere. Other countries have different approaches, for example peer review in the United States, appointment of a *prufingenieur* in Germany and the use of an independent checker for decennial insurance in France. Even in the United Kingdom, the implementation of quality management systems has not been made an express statutory requirement for contractors or designers in construction. In any event, to stipulate that a designer and contractor will operate quality management systems operated within the framework of ISO 9000 only involves a couple of lines in the contract, with words to the effect that the contractor shall operate a certified quality management system.

#### (c) Common law approach to quality

- 17.005** In contrast, the common law regarding quality has traditionally evolved from a simple and typical commercial transaction of sale of goods. The principal means by which quality will be ensured is through testing and inspections. There is no specific regard for any quality system to operate. Even in construction contracts, the approach in Hong Kong up until now has plainly been to treat quality systems separate from primary contractual obligations. In most standard forms of contracts in Hong Kong, the contractual requirement for requiring the contractor and its subcontractors or suppliers to have installed and in operation a typical ISO 9000 quality management system is only found in special conditions of the contract or a requisite requirement in the tendering stage. In the United Kingdom, the continuing move for reform in the construction industry, benchmarked by the reports of Sir Michael Latham entitled "Constructing the Team" and of Sir John Egan entitled "Rethinking Construction",<sup>2</sup> has grown, raising quality systems in the context of contracts to the status of a framework

<sup>2</sup> For likewise development in other jurisdictions, please visit the websites of the Royal Commission into the Building and Construction Industry at <http://www.royalcombeci.gov.au> for Australia or of the Construction Industry Development Board at <http://www.cidb.org.za> for South Africa; and the NZ Construction Industry Council at <http://www.nzcic.co.nz> for New Zealand.

that operates for ensuring compliance and avoiding defects as far as possible, with the dual aims of forestalling non-compliance of quality requirements and providing more immediate remedies in case of such non-compliance. In this context, quality management systems are a device for preventing disputes from escalating.

Similar cultural and mindset changes are going on in Hong Kong. In the report of the Construction Industry Review Committee, entitled "Construct for Excellence" released in 2001, there is a call for fostering a quality culture in the Hong Kong construction industry so that everyone is committed to achieving excellence rather than merely meeting the minimum acceptable standards. Recommendations made there are being implemented, with progress monitored by the then Provisional Construction Industry Coordination Board and now the Construction Industry Council, the details of which are at <http://www.hkcic.org/>.

#### (d) Engineer's and architect's duties in quality control

The general duties of the engineer or architect as provided in typical construction contracts include watching and inspecting the work, testing and examining the material<sup>3</sup> and workmanship<sup>4</sup>. These duties are usually expressly stated to be delegable to the resident team on site. There is, however, no exact definition of these duties and industry standards and specifications are the standards against which these tests, inspections and examinations are measured. In *Gibson v Skibs A/S Marina & Orkla Grube A/B*,<sup>5</sup> it was held that examination meant a more thorough and scientific process than inspection and inspection<sup>6</sup> meant something less than examination but more than a mere casual glance, calling for careful and critical looking with the naked eye but no more than that. Testing and inspection are directed toward checking against defects, and it is the outcome of such testing and inspection that is important. The process of testing and inspection is obviously rigorous throughout and further powers of investigation, by extra testing or inspection, are commonly provided, whether by the industry standard or the specifications, where a defect is observed in the initial outcome. In *McGlinn v Waltham Contractors Ltd (No 3)*,<sup>7</sup> it was held that an engineer's or architect's duty to make periodic inspections required her or him to tailor the frequency and duration of inspections to the nature of the works going on at the site from time to time; and that, depending on the importance of the particular element or stage of the works,

<sup>3</sup> See, e.g. *Merton LBC v Crowe* (1980) 18 BLR 1; *Michael Hyde & Associated Ltd v JD Williams & Co Ltd* [2001] PNLR 233; and *Hammersmith Hospitals NHS Trust v Troup Bywater & Anders* [2000] EnvLR 343.

<sup>4</sup> See, e.g. *Corfield v Grant* (1993) 29 ConLR 58 and *Victoria University of Manchester v Hugh Wilson* (1984) 2 ConLR 43. See also *Florida Hotels Pty Ltd v Mayo* (1965) 113 CLR 588 and *Rowlands v Collow* [1992] 1 NZLR 178.

<sup>5</sup> [1966] 2 AllER 476. In *Paterson v Lees* 1993 SLT 48, it was remarked that "[a] person who is competent to carry out any work is a person who has the knowledge and ability necessary to perform it properly". See also *Re Wing Fai Construction Co Ltd* [2004] 3 HKLRD 357.

<sup>6</sup> Inspection is a lesser responsibility than supervision. See *Jameson v Simon* (1899) Session Cas 1211; *Sutcliffe v Chippendale and Edmonson* (1982) 18 BLR 149 at 162; and *Corfield v Grant* (1992) 29 ConLR 58.

<sup>7</sup> [2008] BusLR 233. As an analogy, in *Smith v South Eastern Power Networks Plc* [2012] BLR 554, where the fires had all started as a result of resistive heating problems in cut-out assemblies but there was no evidence that a careful routine visual inspection would have revealed impending problems, owners of residential and retail properties had failed to establish that any breaches of tortious duty by electricity distributors, such as failing to routinely inspect or replace cut-out assemblies, had caused fire damage to their properties.

the inspecting professional could instruct the contractor not to cover up the relevant elements of the work until they had been inspected.<sup>8</sup>

- 17.008** Hence, the outcome of testing and inspection in construction contracts is of particular importance in at least three ways. First, it reveals whether or not a defect is present; second, it entitles the contractor to follow on with the works after the testing and inspection for a prior stage is passed; third, it triggers the operation of further procedures to follow in investigating compliance, in bringing about remedial proposals or in entitling rejection by the employer.

**(e) Contractor's obligation to fix defects**

- 17.009** The obligations of a contractor in relation to defects are principally governed by the contractual provisions and the exact scope of obligation differs depending on when the defects come to light.

- 17.010** During the defects liability period, whether as designated or extended, the position is undoubtedly different. The contract contemplates that after the time of practical completion, the employer shall have the use of the works for the purpose for which they were built. If the contractor gives possession to the employer of works that do not comply with the terms of the contract because of latent defects of workmanship or materials, the employer may sustain consequential damage that cannot be recompensed by the contractors simply making good the defects. The employer may have been deprived of the profitable use of the works or the defects may have resulted in damage to the employer's plant or goods in the works. Yet, during the construction stage, the contractor may have a continuing duty to rectify defects found in the work. This can come from common law or under the express provision of the contract. It was recognised in *Lintest Builders Ltd v Roberts*<sup>9</sup> that a contractor had a continuing duty during construction, and not only upon completion, to do the work with all proper skill and care. In *Tomkinson v The Parochial Church Council of St Michael*,<sup>10</sup> it was suggested that the employer had a right to call for the rectification of defective work at the time it was done. For the purpose of statutory limitation, the presence of this right during the construction stage of the project may help to prevent time from running

<sup>8</sup> While it is incumbent on the inspecting engineer or architect to keep adequate records of all inspections, the engineer or architect does not guarantee that her or his inspection will reveal or prevent all defective work, and it is thus not appropriate to judge an engineer's or architect's performance by the result achieved. See *Consarc Design Ltd v Hutch Investments Ltd* [2002] PNL R 31.

<sup>9</sup> (1978) 10 BLR 120. See however *Kaye Ltd v Hosier & Dickinson Ltd* [1972] 1 WLR 146 and also *Guinness Plc v CMD Property Developments Ltd (formerly Central Merchant Developments Ltd)* (1995) 76 BLR 40.

<sup>10</sup> (1990) 6 ConstLJ 319. In *Rice v Great Yarmouth Borough Council* [2003] TCLR 1, the UK Court of Appeal, dealing with the alleged repudiatory breach of a maintenance contract, remarked:

"... parallels with building contracts, in the number and variety of the obligations involved and the varying gravity of the breaches which may be committed, some of which may be remediable and some not."

In *Sutcliffe v Chippendale and Edmundson* (1971) 18 BLR 157, it was remarked that, in relation to whether an employer was justified in terminating a contractor's employment, it was highlighted that there might come a point where the defect or the status of the defects became too serious to be treated as a temporary disconformity, whether they were numerous and frequent or not. See also *Adkin v Brown* [2002] NZCA 59. See further *Eu Asia Engineering Ltd v Wing Hong Contractors Ltd* [1991] HKEC 72.

from the date when defective work was being carried out.<sup>11</sup> In *Strathclyde Regional Council v Border Engineering Contractors Ltd*,<sup>12</sup> it was observed that time for the limitation period did not start running at the date when defective work was carried out and that the contractual obligation to remedy any defect arising in the course of the contract, which was specifically provided for in that contract, could not reasonably coexist with a breach that had crystallised to the extent of forming a basis for an action for damages. In *P & M Kaye & Hosier v Dickinson*,<sup>13</sup> which is considered in *Eu Asia Engineering Ltd v Wing Hong Contractors Ltd*,<sup>14</sup> it was recognised by Lord Diplock that, during the construction period it might, and generally would, occur that from time to time some part of the works done by the contractor would not initially conform with the terms of the contract either because it was not in accordance with the contract drawings or the contract bills or because the quality of the workmanship or materials was below the standard required by the contract. It was further observed that the contract placed upon the contractor the obligation to comply with any instructions of the architect to remedy any temporary disconformity with the requirements of the contract and, if it were remedied, no loss would be sustained by the employer unless the time taken to remedy it resulted in practical completion being delayed beyond the date of completion designated in the contract. Obviously, in that event the only loss caused would be the employer being kept from using its building from the date on which it was agreed that it should be ready for use, whereby liquidated damages would become payable. Lord Diplock refused to treat temporary disconformity of the contract as a breach that entitled the employer to damages and said:

"Upon a legalistic analysis it might be argued that temporary disconformity of any part of the works with the requirements of the contract even though remedied before the end of the agreed construction period constituted a breach of contract for which nominal damages would be recoverable. I do not think that makes business sense. Provided that the contractor puts it right timeously [sic] I do not think that the parties intended that any temporary disconformity should of itself amount to a breach of contract by the contractor."

As highlighted in *Accurate Contractors & Renovators Co v Incorporated Owners of Beverley Heights*,<sup>15</sup> failure on the part of the contractor to remedy defective work may usually affect the contractor's extent of otherwise entitlement to the contract sum.

17.011

<sup>11</sup> Indeed, any deficiencies in construction, design, inspection, manufacture or supply of materials must be referable to dates before construction of the centre was completed. As a general rule, however, the defaults of contractors and others attract no legal liability until at least the date of practical completion of the works, and more plausibly until the date on which a final certificate is issued. See *AMN Group Ltd v Gilcomston North Ltd* 2008 SLT 835.

<sup>12</sup> (1998) SLT 175. See *AMN Group Ltd v Gilcomston North Ltd* 2008 SLT 835.

<sup>13</sup> [1972] 1 WLR 146. See *Mariner International Hotels Ltd v Atlas Ltd* (2007) 10 HKCFAR 1. See also *Guinness Plc v CMD Property Developments Ltd (formerly Central Merchant Developments Ltd)* (1995) 76 BLR 40. In *Oxford University Fixed Assets Ltd v Architects Design Partnership* (1999) 64 Con LR 12, it was held that a final certificate in relation to the contractor's obligations over defective blockwork under a 1980 JCT form of contract precluded the employer from proving any such liability on the contractor's part.

<sup>14</sup> [1991] HKEC 72. See also *Onway Engineering Ltd v Chinney Construction Co Ltd* [2005] HKEC 1880, *Pamax Ltd v Cross Max Interiors Ltd* [2008] HKEC 532 and *De Chang Fulfilment Ltd v Manley Toys Ltd* [2013] HKEC 742.

<sup>15</sup> [2012] HKEC 1643.

**(f) Contractor's obligation to use materials and carry out work as specified**

**17.012** In respect of contractual obligations, a common framework in standard forms of construction contracts provides that the contractor is obliged to carry out its work with specified material and workmanship in the way stipulated in the contract. That usually will, by itself, set out the various testing and inspections that the work has to go through, by reference to industry standards or specifications.<sup>16</sup> The employer, via the engineer or architect, is further conferred with a power to direct the carrying out of further testing and inspections and the contractor is required to provide support for these, though the expenses so incurred, if not otherwise provided for in the contract, are normally borne by the employer.<sup>17</sup> Since construction work is carried out in various stages and each stage may cover up the work already carried out in prior stages, there are also express provisions in the contract prohibiting covering up or putting out of view any work without the approval of the engineer or the architect and affording full opportunity for the engineer or the architect to examine and measure such work before it is covered up or put out of view. In practice, prior to the execution of the next stage of work, the contractor is normally required under the system set up on the site to notify the resident team of the engineer or the architect and to obtain the team's approval before proceeding on to the next stage of work.

**(i) Contractor's obligation for care and protection of work**

**17.013** After the work is completed, there is usually a contractual obligation for the care and protection of the work. Thus, the contractor still bears the risk of the completed work, until or unless it has been handed over.<sup>18</sup> The issue of the practical or substantial completion certificate equates the commencement of the maintenance or defects liability period, within which the contractor is under the express contractual stipulation to rectify any defects found or to complete the outstanding work. The length of the maintenance or defective liability period may vary according to the nature of the project and this gives the employer the right to rely on contractual remedies for getting the defects corrected, rather than necessitating recourse to external dispute resolution processes. Within the maintenance or defects liability period, the contractor is obliged to carry out rectification or outstanding work in compliance with the instruction of the engineer or the architect. All such rectification work is to be carried out by the contractor at its own expense if it is

<sup>16</sup> See, for example, *May Tik Decoration Co Ltd v Ronacrete (Far East) Ltd* [2009] HKEC 670, where it was found that the supplier of tile adhesive materials had warranted compliance with the standards the British Standards Institute. See also *Fairlite Industries Ltd v Fosroc Hong Kong Ltd* [2008] HKEC 397 and *Eden Connections Design & Engineering Co v Ayash Omer* [2011] HKEC 1467.

<sup>17</sup> See, for example, *Secretary for Justice v Chong Kui (Group) Co Ltd* [2009] HKEC 190, where acceptance of the materials was subject to testing and inspections. See also *Wong Chuk Kin v Millennium Engineering Ltd* [2007] HKEC 1521 and *Nippon Kanzai Centre Co Ltd v Ho Biu Kee Construction Engineering Co Ltd* [2006] HKEC 2341. As stressed in *Able Contractors Ltd v Wui Loong Scaffolding Works Co Ltd* [2012] HKEC 858, the proof of breach rests on he who affirms not he who denies. It therefore lies upon the party who substantially asserts the affirmative to prove the issue. See also *V Shapes Moulders Ltd v Pacific Dunlop Garments Ltd* [2011] HKEC 757.

<sup>18</sup> As remarked in *Woon Lee (HK) Co Ltd v Holyrood Ltd* [2010] HKEC 1236, the fact that a defect may not be evident at the time of handover does not relieve the contractor from responsibility for poor workmanship. See also the Hong Kong Court of Appeal decision in *Woon Lee (HK) Co Ltd v Holyrood Ltd* [2011] HKEC 528 and *Sun Crown Trading Ltd v Holyrood Ltd* [2012] HKEC 324.

in the opinion of the engineer or architect that such work is due to the use of materials or workmanship not in accordance with the contract or to other default of the contractor.<sup>19</sup> If the contractor refuses to perform accordingly, the employer may, after reasonable notice being given, have such work carried out by its own or arranged labour and the employer is empowered to recover the associated costs from the contractor. Fair wear and tear is normally excepted from the definition of defects for this purpose. Prior to the end of the maintenance or defects liability period, the engineer or the architect is often conferred with the power to order the contractor to have such investigation of the cause of any defect, imperfection or fault carried out, whether by the contractor or by the employer's own labourers. At the expiry of the maintenance or defects liability period, the engineer or architect is required to issue a certificate to that effect, signifying that all defective and outstanding work has been made good.

## 2. DEFECTS IN DESIGN, MATERIALS AND WORKMANSHIP

### *Scope and extent of the contractor's obligations*

The general principles governing implied terms are dealt with in chapter 5 of this book.<sup>20</sup> Specific to the issue of quality in construction projects, the obligations of a contractor toward the employer are controlled by both the express terms and the implied terms of the contract.<sup>21</sup> Generally speaking, the scope and extent of the contractor's obligations depend on the nature of the work undertaken.<sup>22</sup> This obligation imposed on the contractor is generally a continuing duty throughout the stages of construction works. This covers persons to whom the contractor has delegated the work.<sup>23</sup>

17.014

### **(a) Design**

#### **(i) Definition**

Design has been described as including the choice of quality or description of work materials and components, as well as the dimensional or structural design of the final permanent work or product – so that the legal responsibilities arising from it may involve a wide range of concepts of structural soundness, durability, safety, working life, quality, suitability, amenity, ease of maintenance and satisfactory performance after completion.

17.015

<sup>19</sup> Yet, the mere fact that an item does not meet the satisfaction of the employer does not relieve the employer from the burden of establishing that the matter is a defect which is the responsibility of the contractor. See *Woon Lee (HK) Co Ltd v Holyrood Ltd* [2010] HKEC 1236. See also the Hong Kong Court of Appeal decision in *Woon Lee (HK) Co Ltd v Holyrood Ltd* [2011] HKEC 528.

<sup>20</sup> See also s 5 of the Supply of Services (Implied Terms) Ordinance (Cap 457). See *Maintek Computer (Suzhou) Co Ltd v Blue Anchor Line* [2013] HKEC 467 and *Chok Yick Interior Design & Engineering Co Ltd v Lau Chi Lun* [2010] HKEC 967.

<sup>21</sup> See *Fairlite Industries Ltd v Fosroc Hong Kong Ltd* [2008] HKEC 397 and *Chok Yick Interior Design & Engineering Co Ltd v Lau Chi Lun* [2010] HKEC 967.

<sup>22</sup> See *Chok Yick Interior Design & Engineering Co Ltd v Lau Chi Lun* [2010] HKEC 967, where a subcontractor for tiling work and painting waterproof material was held not liable for the water leakage as there was no implied guarantee in the contract.

<sup>23</sup> See *Stag Line Limited v Tyne Shiprepair Group Limited (The Zinnia)* [1984] 2 Lloyd's Rep 211 and *Norta Wallpapers (Ireland) Limited v John Sisk and Sons (Dublin) Limited* (1978) 14 BLR 49.

## 1. TREND TOWARD ALTERNATIVE DISPUTE RESOLUTION

### (a) Reasons for trend

The trend in resolution of construction disputes is moving away from litigation.<sup>1</sup> The process by which construction projects are executed requires relationships and organisation structures that are very different from those in other businesses. Consequently, this has led the construction industry in each place to develop its own particular culture, tradition, customs and language. Also, most construction disputes are surrounded by a complicated factual matrix and frequently involve technical and dedicated questions that are not readily within the experience of persons not in daily encounter with the industry. Problems leading to construction disputes not uncommonly concern interim payments, final accounts, release of retention payments to suppliers and subcontractors, abandonment or termination of works, defects and rectification works, valuation of variation works and delayed completion of works. Moreover, due to the complex issues and heavy documentation involved, the costs of resolving construction disputes by litigation can be prohibitive.

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### (b) Features of alternative dispute resolution (ADR) in the construction industry

It is due to a couple of these reasons that the construction industry has been using ADR longer than most other industries. The field of ADR covers a broad range of mechanisms and processes designed to assist parties in resolving disputes creatively and effectively.<sup>2</sup> Among such ADR mechanisms, the construction industry opted for arbitration instead of litigation years ago by incorporating arbitration clauses in almost all standard forms of contract in the industry. In recent years, the construction industry has been in the frontline of the innovative development and novel use of ADR and has pushed the application of ADR beyond traditional limits and boundaries. It is probably one of the largest users of ADR services among all the business sectors. This means that construction disputes are in the main resolved by construction ADR professionals or neutrals rather than the court. Indeed, many of these neutrals come from within the construction industry or are experienced construction litigators. Apart from mediation and arbitration, the present ADR movement in the construction industry places emphasis on prevention, control and earliest resolution of disputes as they arise, therefore dealing with the disputes 'upstream' rather than down the pipeline. Devices, such as dispute resolution advisers, dispute review boards and adjudication, are being implemented in the contracts; and concepts, such as partnering and risk allocation, are being pioneered in the management set-up. There is

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<sup>1</sup> See Guidelines on Dispute Resolution (2010), Hong Kong Construction Industry Council. In the Guidelines, the need for immediate dispute resolution for the construction industry is further explored. See also Reference Materials for Application of Dispute Resolution in Construction Contracts (2013), Hong Kong Construction Industry Council.

<sup>2</sup> These commonly include adjudication, arbitration, dispute resolution advisers, expert determination and mediation in Hong Kong. A new concept of independent expert certifier has also been introduced in Hong Kong, by the Guidelines on Dispute Resolution (2010), Hong Kong Construction Industry Council, providing for interim decisions reviewable by post-completion arbitration. In the Reference Materials for Application of Dispute Resolution in Construction Contracts (2013), Hong Kong Construction Industry Council, other methods such as independent expert certifier review and short form arbitration are also discussed.

now a vast spectrum of private dispute avoidance and resolution possibilities available for choice. New techniques are being invented each day by imaginative professionals and practitioners in the field. This spectrum is best illustrated by a stair-step sequential model that begins with prevention and ends with litigation. The rising of each step in the model reflects escalation in hostility and costs to the participants.

**21.003** The current philosophy is that disputes should be avoided if possible and, where avoidance fails, they should be resolved as soon as practicable. The use of dispute resolution advisor has been recommended in the Hong Kong Construction Industry Council Guidelines on Dispute Resolution (September 2010) to resolve arguments at first instance. In the Hong Kong Construction Industry Council Reference Materials for Application of Dispute Resolution in Construction Contracts (January 2013), five dispute resolution mechanisms, namely mediation, adjudication, independent expert certifier review, expert determination and short form arbitration, are proposed together with the corresponding sets of rules that can be made available to the parties to choose from during the currency of the works. These immediate dispute resolution mechanisms which are available for use during the currency of the works should be inexpensive, simple, user-friendly, effective and speedy. Some of these immediate dispute resolution mechanisms produce results that are binding in the interim during the currency of the works, but they can be challenged and revised by arbitrators in arbitration commenced after completion of the works.

**21.004** As detailed below, adjudication has also been widely adopted together with security of payment legislations in various jurisdictions to provide speedy and interim resolution of disputes during the currency of the works.

#### (c) Advantages of ADR

**21.005** For those who advocate the use of ADR, there are certain recurrent favourable features:

##### (i) Control

**21.006** By using the ADR clause, the parties are able to manage how their disputes will be resolved, knowing the procedures to be expected.

##### (ii) Speed

**21.007** Most forms of ADR have the ability to resolve disputes months or years ahead of traditional litigation, with a schedule agreed to or counted on.

##### (iii) Lower costs

**21.008** If used properly, ADR may resolve disputes less expensively than litigation. Even though in some cases, the actual arbitration proceeding may be identical in length to the trial in courtroom litigation, parties may still save time and money as the preliminary hearings can take place promptly and would not normally be constantly postponed.

##### (iv) Flexibility

**21.009** Flexibility of outcome is arguably one of the most important, but often overlooked, advantages of ADR. This is particularly of relevance for ADR with facilitative processes or advisory processes.

##### (v) Confidentiality

Most forms of ADR are private. This may be increasingly important with the ease of instant dissemination of information by electronic or other means nowadays.

##### (vi) Lower hostility

ADR operates in a less formal setting and atmosphere. Even with the most adversarial form, ie arbitration, it still promotes a less stressful or damaging formal setting, with fewer procedural blocks and more focus on the real issues between the parties, as compared to litigation. This may help where the parties wish to preserve an existing relationship.

##### (vii) Finality

A dispute ends when the parties agree to end it. In ADR, like mediation, it is more likely that the parties will observe and comply with the terms to which they have agreed. In arbitration, the award may be overturned only in very limited situations, without default of the arbitrator or the process.

##### (d) Goal of ADR

It is important to keep construction projects moving. When construction disputes arise, the focal point today is on positively managing them through well-drafted contract provisions and ADR mechanisms. This is to minimise any adverse impact on the project and those involved in the project. Thus, the focus of current construction ADR is first and foremost on preventing disputes where possible. While binding arbitration is a widely accepted mechanism for ending a dispute that the parties cannot otherwise resolve on their own, the construction industry now includes in contracts ADR provisions that give the parties fast, inexpensive, informal and less adversarial dispute resolution options. It is of course envisaged that construction disputes may be inevitable, and this is the reason why the construction industry continues to lead the way in the development of techniques to resolve them. It should be remembered that, in construction, time is money. There are also many good reasons why, in construction projects, there is a need for a rights-based approach that produces a binding decision. This context may be of very different focus among those ADR techniques that favour facilitation of a commercial resolution. Typical reasons for a decision include, for example, uncertainty as to the contractual scope of works arising from doubt about the specification, or arguments as to entitlement to the release of interim monies which are vitally important to cashflow on the project. Hence, one goal of a comprehensive disputes provision is to give the parties every opportunity to resolve a dispute promptly, with the help of neutral assistance introduced at the earliest appropriate time to assist the parties in resolving the dispute on their own terms.

##### (e) Evolution of ADR

Today, ADR in general, and ADR for construction disputes in particular, is evolving and evolving fast. Attempts have been made to find tailor-made ADR for tackling the features of the construction industry, which has long recognised that the most efficient time to resolve a dispute is the moment that it first arises. Indeed, for more than 100 years, the construction industry has been using a two-step process for resolving

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disputes on the site by first calling on the project engineer or architect to immediately make an objective ruling on the issue whenever a problem arises. If that ruling cannot solve the dispute, the parties can then refer the issue to a process of arbitration for a binding decision. Such a system served the industry well until the past 30 years or so, when it became less effective than it once was. This may partly be a result of changing views as to the weight to be attached to decisions of engineers or architects.

- 21.015** With the work of the Hong Kong Construction Industry Council, the Hong Kong construction industry is heading for change. In the 2001 report of the Construction Industry Review Committee, "Construct for Excellence", an integrated approach to construction is advocated with a view to helping the inculcation of a more constructive attitude among members of the construction team in handling problems arising during the project delivery process. It is expected that the causes of dispute will be reduced with clearer project definition, more equitable risk allocation between the employer and the contractor, and improved procurement and tendering procedures. Yet, when a dispute becomes unavoidable, the importance of managing the dispute actively and positively to encourage early and effective settlement is stressed. It is expected that the use of proactive and collaborative ADR procedures, such as mediation, dispute resolution advisers and adjudication, will be necessary depending on the circumstances and needs of a particular dispute. Following the recommendations made in the Civil Justice Reform,<sup>3</sup> more affirmative use of ADR in litigation is expected. For example, litigants will be asked whether they have considered the use of mediation or other forms of ADR and those who unreasonably fail to attempt such may be visited with adverse costs consequences at the conclusion of the litigation. Viewed as such, the construction industry in Hong Kong is not much different from that elsewhere in the world in its journey upstream on the ADR path.

<sup>3</sup> See *Pacific Long Distance Telephone v New World Telecommunications Ltd* [2012] HKEC 732. See also *iRiver Hong Kong Ltd v Thakral Corp (HK) Ltd* [2008] 4 HKLRD 1000, where it was remarked by Yeung JA:

"The mere fact that negotiation between solicitors failed to result in the settlement does not mean that the parties would not benefit from mediation conducted by a skilled mediator. As observed by Brooke LJ in *Dunnett v Railtrack Plc* [2002] 1 WLR 2434 at paragraph 14 "skilled mediators are now able to achieve results satisfactory to both parties in many cases which are quite beyond the power of lawyers and courts to achieve... when the parties are brought together on neutral soil with a skilled mediator to help them resolve their differences, it may very well be that the mediator is able to achieve results by which the parties shake hands at the end and feel that they have gone away having settled the dispute on terms with which they are happy to live. A mediator may be able to provide solutions which are beyond the powers of the court to provide."

See also the Hong Kong Court of Appeal decision of *iRiver Hong Kong Ltd v Thakral Corp (HK) Ltd* [2008] 4 HKLRD 1000. In *Vellacott v Convergence Group plc* [2007] EWHC 1774 (Ch) Rimer J (as he then was) held that the costs of a failed post-action mediation were costs incidental to the court proceedings. It is a question of fact whether a mediation is so closely connected with a piece of litigation such that the costs of mediation can properly be described as costs incidental to a set of legal proceedings. If a mediation takes place a long time ago before parties commence legal proceedings, the court may be slow to conclude that the costs of such a mediation should be taxable as costs incidental to the legal proceedings. See *Chun Wo Construction & Engineering Co Ltd v China Win Engineering Ltd* [2008] HKEC 977. See further *Resource Development Ltd v Swanbridge Ltd* [2010] HKEC 841.

As highlighted in *Corenso (UK) Ltd v Burnden Group Plc* [2003] EWHC 1805 (QB), a party could quite properly discharge his obligations to consider alternative dispute resolution (ADR), and to attempt to engage in it, without necessarily being prepared to enter into mediation if he took the view that there were other forms of ADR which were more appropriate or more likely to produce the appropriately desired result. So long as parties showed a genuine and constructive willingness to resolve the issues between them, a party would not be automatically penalised because that party had not gone along with a particular form of ADR proposed by the other side.

#### (f) Scope of ADR

There is no exact definition of the classification or scope of ADR, as ADR does come in hybrid formats.<sup>4</sup> With a wide definition, ADR refers to virtually any method of resolving disputes other than by traditional litigation. A well-planned process should incorporate any number of attributes to suit the needs of the parties. These include having a relatively low cost compared to litigation; bringing disputes to resolution in a relatively short time; utilising expert decision-makers, with necessary assurance that they understand the issue in dispute; reducing formality as compared to litigation; offering flexibility with adjustment for particular needs of the parties; providing opportunities to address problems, while causing less damage to an ongoing relationship among the parties; and vesting primary control in the parties themselves. **21.016**

A scientific and more helpful classification of ADR processes involving third-party intervention may be the one given by the Australia National Alternative Dispute Resolution Advisory Council, which describes ADR processes as facilitative processes, advisory processes and determinative processes. **21.017**

#### (g) Facilitative processes

The role of the third party in facilitative ADR processes is to provide assistance in the management of the dispute resolution process. The third party's focus is to advise on or determine the process whereby resolution is attempted. In contrast to other types of ADR processes, there is no advisory or determinative role to play in relation to the substance of the dispute or the product of its resolution. A classic model of this is the typical process of mediation. Mediation involves the appointment of a third party as mediator to assist disputing parties to reach a settlement of their difference. The mediator is not given any power to impose a settlement. The mediator's function is to try to break any impasse and encourage the parties to reach an amicable settlement themselves. **21.018**

#### (h) Advisory processes

Advisory processes involve those ADR processes where a third party is asked to investigate the dispute and provide advice as to the facts of the dispute or, in some cases, probable and desirable outcomes. Depending on the parties' agreement, the result of investigation may also be binding. An example of this form of process include mini-trials, which are a process presided over by a judicial figure or neutral adviser, who, after the abbreviated presentation of evidence by representatives of the parties who have authority to settle the dispute, provides advice as to the facts of the dispute or advice regarding the possible or probable outcomes of the dispute and the means for achieving them. **21.019**

<sup>4</sup> An example for this is the Dispute Resolution Advisor (DRA), where a neutral person is selected from a panel of construction professionals and paid for jointly by the employer and the contractor, working with them as well as the architect/engineer to encourage cooperation and joint problem solving and to encourage the resolution of disagreements at the site level and if not successful, at the senior level, to ensure that disagreements are resolved expeditiously and cost-effectively before they turn into formal disputes.

**(i) Determinative processes**

- 21.020** The most well known form of the determinative processes in dispute resolution is arbitration, apart from, of course, litigation. In general, during such a determinative process, a neutral third party is appointed to investigate the dispute (which may include the hearing of formal evidence from the parties) and make a determination, which is potentially enforceable, as to its resolution. The outcome of such determinative processes may further be directly enforceable as is the case in arbitration, which is a process governed by statute and has a long-established relationship with the courts, resulting in an award that is binding on the parties. Other examples of such determinative processes with an enforceable outcome include adjudication, where the parties present argument and evidence to the adjudicator who makes a determination which is binding but can be subject to a review or appeal by way of rehearing with arbitration or litigation, and expert determination which is a process in which the parties to a dispute present argument and evidence to a neutral third party expert for determination, chosen on the basis of her or his specialist qualifications or experience in the subject matter of the dispute.
- 21.021** A determinative process may also be without enforceable effect, for example, in neutral fact-finding, which is used in cases involving complex technical issues, where a neutral expert investigates the facts of the case and produces a determination as to the facts of the dispute, without at the same time making any finding or recommendations as to the outcome for resolution.
- 21.022** The qualities and qualifications required by the third party, the nature of their responsibilities to the parties in the dispute and the outcome to be expected from the process will vary from one category to another. In some cases, several processes or a hybrid of the processes may be employed in an attempt to resolve the same dispute. An example of this is the device of dispute resolution adviser that has been in used in Hong Kong or the dispute review board that is gaining popularity in the United States.
- 21.023** Whichever process is adopted, the overall objectives of ADR are to resolve disputes using a process that is considered by the parties to be fair, achieving acceptable outcomes that are lasting and using resources effectively.

**2. DISPUTE RESOLUTION ADVISER/DISPUTE REVIEW BOARD****(a) Real-time dispute resolution**

- 21.024** Dispute resolution advisers and dispute review boards and are often referred to as 'real-time' dispute resolution mechanisms that involve the parties working together to negotiate a solution simultaneously with their identifying issues. In contrast with those so-called 'forensic' dispute resolution mechanisms that look backward to scrutinise the facts and issues of dispute after the project is completed, the focus of dispute review boards and dispute resolution advisers is less on fault finding or allocating blame.

**(b) Growth of dispute review boards**

- 21.025** In the United States, the use of dispute review boards is growing. The first uses of dispute review boards were on tunnelling projects. These projects, as with other

large-scale construction projects, often include disputes between the employer and the contractor due to the nature and uncertainty of the work, its complexity and its magnitude. The resolution of these disputes can be a costly and time-consuming distress for both the employer and contractor. The use of dispute review boards then spread to other geo-technical and civil engineering projects and, later to industrial projects, and eventually to ordinary building projects. The widespread use of dispute review boards in the United States contributed to the issue of guide specifications by the American Society of Civil Engineers. The Dispute Resolution Board Foundation (<http://www.drb.org/>) reports that, from 1988 through 2002, on over US\$79.4 billion of contracts using dispute review boards, 97.79 per cent of disputes were settled without litigation and, for those disputes that advanced into the process of litigation, virtually all were resolved shortly after litigation commenced. Thus, development in respect of dispute review boards seems both interesting and attractive to the construction industry.

**(c) Dispute review board process**

The key concept in the operation of dispute review boards is the formation of a panel of three experienced, respected, and impartial reviewers to attend site meetings on a regular basis to review the status of the project and to discuss with the parties potential disputes. When a dispute arises, the dispute review board provides a real-time knowledgeable and independent assessment of the merits of the dispute as a non-binding, intermediate step in the resolution process.<sup>5</sup>

This panel or board of reviewers is organised before construction begins and the reviewers meet with the parties on site periodically. To maintain fairness, the board is usually formed by a member selected by the employer for approval by the contractor, a member selected by the contractor for approval by the employer, and a third member selected by the two chosen reviewers for approval by both parties. These three board members then select one among themselves as the chair, with the approval of the employer and contractor.

Regularly, the board members meet together with the representatives of the employer and the contractor during site visits and their aim is to encourage the resolution of disputes at site level. To help achieve this, the board members are provided with the contract documents and are kept abreast of site progress and developments. They are also briefed with the project procedures and introduced to the participants. The target of the dispute resolution process is to help the parties deal with the problems head-on, as they arise on site, so as to stop them from escalating into major and damaging disputes.

When a dispute does arise, either the employer or the contractor may refer it to the dispute review board for resolution. In reviewing it, a hearing may be held so that each party can attend to explain its position and provide answers to questions. The board then arrives at a recommendation, which is usually non-binding, taking into account the relevant contract documents, correspondence, other documentation and the particular circumstances of

<sup>5</sup> For illustration, see *AMEC Group Ltd v Secretary of State for Defence* (2013) 146 Con LR 152, *Multiplex Constructions (UK) Ltd v Cleveland Bridge UK Ltd* (2006) 107 Con LR 1 and *Cable & Wireless Plc v IBM United Kingdom Ltd* [2003] BLR 89.

the dispute. This written, non-binding recommendation given by the board commonly includes an explanation of the board's evaluation of the facts, the contract provisions and the reasoning that led to its conclusion. In theory, the parties are at liberty to reject the recommendation but, with their confidence in the technical expertise, first-hand understanding of the project conditions and practical judgement of the board, acceptance of the recommendation is likely in light of the opportunity given to the parties to be heard.

- 21.030** Though the board's recommendation is non-binding, some of the dispute resolution board processes provide for the admissibility of the board recommendation into any subsequent arbitration or legal proceeding. This is seen to be of added benefit in enhancing the effectiveness of the dispute review board process overall.

#### (d) Elements essential for success

- 21.031** To be successful, there are certain essential elements in the dispute review board process, according to the *Construction Dispute Review Board Manual*.<sup>6</sup> All three members of the board are neutral and subject to the approval of both parties. The board is to serve both the employer and the contractor equally and fairly and be paid equal shares of its fees and expenses by the employer and contractor. The board needs to be organised when work begins, before there is any dispute, and be kept abreast of site developments by means of relevant documentation and regular site visits. Both the employer and the contractor have the same right to refer a dispute to the board, which deals with the dispute by an informal but comprehensive hearing promptly convened. It is also considered an essential element for the written recommendations of the board to be non-binding on either party but admissible as evidence, to the extent permitted by law, in case of later arbitration or litigation. Also, the board members should be absolved from any personal or professional liability arising from their activities in the process.

#### (e) Advantages of dispute review board system

- 21.032** The key advantages of using a dispute review board in a construction dispute is the quick settlement of disputes, thereby maintaining cashflow for the contractor and allowing personnel to work on more productive projects. This significantly reduces the time and money wasted by and tied-up in a dispute during and after the execution of a project. Furthermore, with the respected standing and informed choice of members of the dispute review board, the recommendations of the board are viewed as having significant merit. More importantly, an atmosphere for cooperation can be created in the problem solving from the beginning of a project.

#### (f) Drawbacks of the dispute review board system

- 21.033** On the other hand, the whole concept of dispute review boards is still quite new, particularly in places outside the United States. This lack of understanding and training overall in the industry can hamper the healthy growth of its use. Understanding is key to making the

<sup>6</sup> Matyas, Mathews, Smith and Sperry, *Construction Dispute Review Board Manual* (McGraw-Hill, 1996).

process work. More importantly, from a cost-effectiveness point of view, the potential for achieving savings in costs and time in dispute resolution through avoidance may only be justified in large projects. This factor alone may restrain the use of dispute review boards only to such large projects. For smaller projects, the cost of supporting a three-member dispute resolution board may be prohibitive. Variation to a one-person board may in such cases be an option where the same principles and approach are adopted in choosing the board member. One further observation that may be made is that dispute review boards are good at resolving technical issues, where expertise and judgements can be supplied via the experience of the board members. Yet, dispute review boards may not be as good, or less effective, in dealing with difficult commercial and contractual disputes.

#### (g) Development of the dispute resolution adviser system

Similar to the approach of the dispute review board, a more structured system using dispute resolution advisers has been in use in Hong Kong. The dispute resolution adviser system was developed under the direction of the Architectural Services Department in 1991 and was first used in the Queen Mary Hospital extension and renovation project and later in the Queen Elizabeth Hospital refurbishment project in 1993. Since being introduced, the dispute resolution adviser system has been used on over 40 completed projects involving the construction of hospitals, offices and residential buildings. Its use has also been extended to projects of other government departments.

#### (h) Objectives of the dispute resolution adviser system

There are four basic objectives of the system: to encourage cooperation and joint problem solving to prevent disputes from arising; to try to resolve disputes at site level; to resolve any disputes not settled at site level as quickly and as cost-effectively as possible; and to resolve all disputes during the life of the contract.

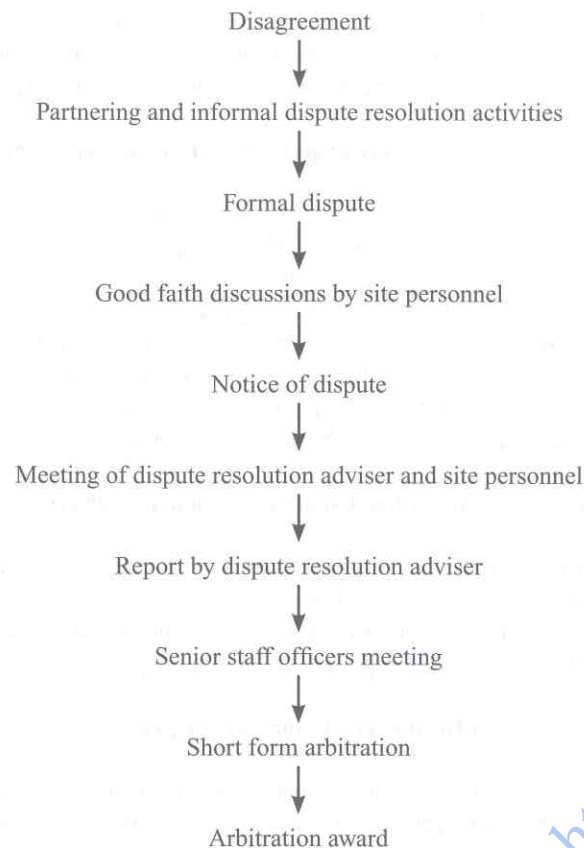
#### (i) Dispute resolution adviser process

The dispute resolution adviser is jointly chosen and appointed by the parties at the contract's commencement. The fees of the adviser are shared equally between the parties. If the parties cannot agree on a suitable individual, the adviser is chosen by a ranking system. If this also fails to secure the agreement, then the adviser may be chosen by the Hong Kong International Arbitration Centre, which maintains panels of mediators and arbitrators. The adviser is an individual, familiar with construction, which possesses dispute resolution skills and preferably has some knowledge of arbitration.

As in the case of a dispute review board, the dispute resolution adviser conducts a series of familiarisation meetings and becomes familiar with the project, the construction programme and the participants, including representatives from the specialist subcontractor's and employer's management. The adviser visits the site on a monthly basis and assists the site level representatives to facilitate settlement of any disagreements or disputes that have arisen during the previous month. This assistance can either be formal or informal. The adviser operates on an informal level where there is disagreement but it has not yet become a full-blown dispute. The appointment of the

adviser ceases upon the issue of a certificate of practical completion and may also be discharged anytime jointly by the parties or, after the first six months, unilaterally by one of the parties.

**21.038** The typical process of the dispute resolution adviser system<sup>7</sup> can be summarised as below:



#### (j) Implementing real-time dispute resolution

**21.039** To encourage 'real-time' dispute resolution, it is important that there is full cooperation with the dispute resolution adviser and also full compliance with the stipulated time limits by the employer and the contractor. Either of the parties have 28 days in which to challenge any decision, certificate or evaluation made under the contract; failure to do so renders the decision, certificate or evaluation final and binding. Preliminary timeframes have been inserted into the contract for the

<sup>7</sup> There are variations to the dispute resolution adviser system for projects by different authorities, such as the Hong Kong Housing Authority and the Works Departments.

making of certain decisions and evaluations. If the decision, certificate or evaluation is challenged, the site level representatives of the parties have 28 days in which to attempt to resolve the matter by good faith negotiation. If desired, the dispute resolution adviser may assist the representatives with their negotiation during one of the monthly visits. If the matter has not been resolved before the expiry of the 28 days, then the aggrieved party is required to give a formal written notice of dispute. If no notice is given, the right to dispute is deemed waived. Thereafter, the dispute resolution adviser and the site level representatives then have 14 days in which to attempt to resolve the dispute. This is the formal stage of dispute resolution involving the adviser. The adviser is free to choose the most appropriate ADR technique to help the parties resolve the dispute. This may be formal mediation, mini-trial, expert fact-finding, expert opinion, etc. If there is to be a formal mediation that is likely to be evaluative or involve specialist knowledge, then the mediation will most likely be carried out by another neutral person rather than the adviser. If necessary, the 14-day time period may be extended to accommodate the availability of the chosen neutral person. The process ends if the dispute is resolved.

#### (k) If the dispute is unable to be resolved

If the dispute resolution adviser and the site level representatives have been unable to settle the dispute, the adviser produces a report that contains an analysis of the dispute, the key issues and the adviser's perception as to the barriers of settlement. This report is given to the senior staff members of the parties, in order that they may appreciate the true nature of the dispute. If both senior staff members request it, the adviser's report will also contain either a non-binding recommendation for resolution or a non-binding evaluation of the dispute. The senior staff members, who are the individuals in the day-to-day management of the contract and are not involved in the decisions that are being disputed, can bring a non-emotional, broader perspective to the dispute. Hopefully, the senior staff members can meet and resolve the matter. If desired, the adviser will attend these meetings with the senior staff members.

If the matter is still not resolved within 14 days of the report of the dispute resolution adviser, then the adviser will convene a short-form arbitration, unless the parties have accepted a recommendation from the adviser to resolve the matter by some other means. The arbitration is governed by special rules, which are written into the contract and will take place within 28 days of the date on which settlement efforts by the senior staff officer were terminated. The arbitrator will be selected by the parties in the dispute including, where appropriate, those subcontractors who may be required, by the terms of their subcontracts, to participate in the arbitration. The arbitrator will be appointed by an exchange of lists, but if this proves unsuccessful, will be selected by the adviser and appointed by the parties. Such short-form arbitration usually deals with one issue only in each hearing and the time for a hearing is limited to one day. The arbitrator has seven days from the hearing to make an award, containing only a concise reasoned decision with sufficient details. In such arbitration, the dispute resolution adviser cannot be called as a witness.

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21.041

**(l) Advantages of the dispute resolution adviser system**

- 21.042** Thus, the dispute resolution adviser system employs partnering techniques to realign the parties' thinking and encourages different forms of negotiation through a multi-tiered dispute resolution process. It may be viewed as a hybrid ADR process combining the elements of negotiation, mediation, expert determination, mini-trial, dispute review board and arbitration. With this blended process, the dispute resolution adviser system has the advantage of starting early and being expeditious, economical, consensual, flexible and within the parties' control.

**(m) Elements essential to success**

- 21.043** As with partnering, there are several factors that are critical to the successful and beneficial use of the dispute resolution adviser system. Though it can be highly flexible when put into application, to ensure optimal effect, several basics must be in place. Among the critical success factors, one clearly important factor is the good faith exchange of the parties, facilitated through the adviser.
- 21.044** Certainly, the roles and functions of the personnel involved differ at various stages of the dispute resolution adviser process. Yet, adequately preparing and planning for the process are crucial to success. For the parties, they need to come to the process with three broad issues well prepared. First, a party must identify what it or its client seeks to accomplish from the process of the dispute resolution adviser system and what options are available to reach those goals. This naturally involves the determination of one's needs, interests and desires and requires a delicate balancing of all consequences – economic, social and psychological – that may flow from there. Second, the party must begin analysing information to determine what it believes to be the other side's goals and any perceived solution to meet those goals. This may involve asking questions on what position the other side is likely to take; what its probable bottom line is; what the other side is likely to want to achieve; and what it will likely see as appropriate ways to achieve that goal. This is an equally important step in anticipating the other party's bargaining range, through formal or informal information available or to be made available. To the extent that additional information is available from sources other than the other side, preparation requires acquisition of this information. In doing so, it is necessary to bear in mind that in the real world, there is no perfect information, and on this point, both parties are on equal footing. Third, planning and preparing for the dispute resolution adviser process will not be completed until and unless a party to it has formulated a blueprint of the means for achieving the desired goals. This calls for a decision on how a party is going to achieve its goals in the dispute resolution adviser process. This list of actions can be quite long. The overriding question is however quite simple – how to maximise one's success in the dispute resolution adviser process. Before coming to the dispute resolution adviser, each party needs a goal, a plan and a theme. A goal is an articulated tentative settlement range or an analysis of the needs and resources associated with a non-monetary solution or an integration of the two; a plan is an assignment of roles to be played by the personnel of the parties; a theme is a distillation of the dispute into one or more key strategic themes that will encapsulate the position of the party and the thrust of the discussion. As for the dispute

resolution adviser, he or she should possess a basic understanding of construction, strong communication and listening skills, solid organisational and people skills, demonstrated team-building skills and well-developed problem-solving or conflict management skills. What the adviser seeks to do in the facilitated exchanges is to assist the parties in focusing on common problems and goals; create an atmosphere of openness and trust; build consensus and commitment on all topics; establish credibility and trust; match the personality and style of the project stakeholders; maintain flexibility; control the process; and generate participation.

**(n) Conclusion**

In brief, the philosophy is that coming together is a beginning, keeping together is progress and working together is success. With a dispute review board or dispute resolution adviser system in place, the parties will themselves make an effort to resolve potential disputes and reduce matters in contention. Its very existence minimises the escalation of disputes and fosters cooperation between the parties. This provides the momentum for amicable settlements to be reached. Also, where disputes do arise, claims and defences are more carefully prepared and more credible, so as not to appear imprudent or unreasonable before the board or adviser. In a way, the parties are motivated to conduct their own checking and analysis before facing the music. This promotes positive, rather than adversarial, attitudes. When a dispute does arise, it is usually given early attention and is addressed contemporaneously. By regular review of the progress of claims, the board or adviser preserves opportunities to settle and prevents parties' subjective wishes from becoming expectations. Issues in dispute are each isolated and contained. With the continuing knowledge and familiarity of the board or adviser over the project, facts are better understood and the reconstruction of historical events is kept to a minimum.

**21.045****3. CONSTRUCTION ADJUDICATION****(a) Definition and development**

Adjudication may be defined as an accelerated and cost-effective form of dispute resolution that, unlike other means of resolving disputes involving a third party intermediary, the outcome is a decision by a third party which is binding on the parties in dispute.<sup>8</sup> Adjudication is a form of dispute resolution that meets a need for a rapid, relatively inexpensive dispute resolution, which provides a decision that can be implemented immediately.

**21.046**

<sup>8</sup> In the Guidelines on Dispute Resolution (2010) published by the Hong Kong Construction Industry Council, adjudication is defined as where the adjudicator will allow the parties to present their case and deal with that of the opponent whilst to a certain extent also using her or his own expertise to understand the issue and to resolve the dispute within a short time frame. It thus provides an alternative if a final result by way of expert determination is not preferred. See also Reference Materials for Application of Dispute Resolution in Construction Contracts (2013), Hong Kong Construction Industry Council.