



Chapter 1

Construction Contracts in General

1.1 Introduction

Numerous books have been written on the subject of construction contracts. However, many of those are of a specialist nature and most are written from the perspective of English law. The aim of this book is to provide a practical guide to construction contracts governed by the law of Scotland.

There is no doubt that the construction industry not only in Scotland, but throughout the UK, is currently being presented with continuing challenges of an almost unprecedented nature. In the first quarter of 2013, the construction industry suffered a contraction of 2.5% compared with the same period in the previous year, despite a growth in overall Scottish gross domestic product (GDP) of 1.2%. While some major public sector infrastructure projects have lessened the impact of the economic downturn on the Scottish construction sector, the lack of external funding has been a major factor in the sharp reduction in the number of new private commercial development projects.

However, the very size of the construction industry means that it is of huge significance to the economy. According to figures contained in the report by Construction Scotland, *Building for the Future: The Scottish Construction Industry's Strategy, 2013–2016*, the construction industry generates £27.4 billion (GDP) to the Scottish economy every year, contributing 10% of Scotland's total economic output, and 170,000 people work in construction in Scotland, around 10% of the total Scottish jobs.

1.2 Definition of a construction contract

1.2.1 General

The definition of a construction contract is not straightforward. The construction industry encompasses building and engineering projects which differ enormously in nature, size and complexity. The terms 'building contract' and 'construction contract' are often used interchangeably. The term 'construction contract' was given a statutory meaning for the first time by section 104 of the Housing Grants, Construction



and Regeneration Act 1996 ('the 1996 Act') and the breadth of the definition illustrates the wide-ranging nature of construction contracts. The 1996 Act has been amended by the Local Democracy, Economic Development and Construction Act 2009 in relation to contracts entered into in England and Wales from 1 October 2011 and in Scotland from 1 November 2011. One of the key amendments was the repeal of the requirement that a construction contract for the purposes of the 1996 Act must be in writing. The following sections summarize the principal requirements of the statutory definition of 'construction contract'. However, it is important to bear in mind that this statutory definition is relevant only for the purposes of the 1996 Act and for determining whether the provisions of Part II the 1996 Act, such as adjudication and payment requirements, will apply to a particular contract. The fact that a contract is not a 'construction contract' for the purposes of the 1996 Act does not mean that it may not be a construction contract in the commonly understood sense of the term, and indeed some contracts falling with the statutory definition, such as for architectural services, would not be described as a construction contract in everyday terms. An English court has recently held that a collateral warranty may, depending on its terms, be a construction contract for the purposes of the 1996 Act and thus subject to the statutory adjudication provisions, see *Parkwood Leisure Ltd v. Laing O'Rourke Wales and West Ltd* (2013) and the discussion of this case in Section 13.4. The 1996 Act has no relevance in determining whether a contract exists in the first place since this will be determined by a matter of law and evidence; putting it at its simplest, whether there was sufficient consensus as to the essential terms and sufficient proof of such consensus.

It should also be noted that the Scottish Government's legislative programme for 2013–2014 includes the Conclusion of Contracts, etc. Bill, which is intended to allow contracts to be concluded by email and to provide a simpler process for formal execution (signing) of contracts.

1.2.2 Construction contracts under the 1996 Act

Part II of the 1996 Act applies to 'construction contracts', being agreements in relation to 'construction operations'. These terms are defined respectively by sections 104 and 105.

Section 104 provides as follows:

1. *In this Part a 'construction contract' means an agreement with a person for any of the following –*
 - (a) *the carrying out of construction operations;*
 - (b) *arranging for the carrying out of construction operations by others, whether under sub-contract to him or otherwise;*
 - (c) *providing his own labour, or the labour of others, for the carrying out of construction operations.*
2. *References in this Part to a construction contract include an agreement –*
 - (a) *to do architectural, design or surveying work, or*



1.2 Definition of a construction contract

3

- (b) *to provide advice on building, engineering, interior or exterior decoration or on the laying-out of landscape, in relation to construction operations.*
3. *References in this Part to a construction contract do not include a contract of employment (within the meaning of the Employment Rights Act 1996).*
 4. *The Secretary of State may by order add to, amend or repeal any of the provisions of subsection (1), (2) or (3) as to the agreements which are construction contracts for the purposes of this Part or are to be taken or not to be taken as included in references to such contracts ...*

It will be noted that the 1996 Act applies to matters beyond the carrying out of building works. It applies to architectural, design and surveying works and to advising on building, engineering, interior or exterior decoration or on the laying-out of landscape in relation to construction operations.

The definition of 'construction operations' is central to Part II. This term is defined by section 105(1) which provides as follows:

1. *In this Part 'construction operations' means, subject as follows, operations of any of the following descriptions –*
 - (a) *construction, alteration, repair, maintenance, extension, demolition or dismantling of buildings, or structures forming, or to form, part of the land (whether permanent or not);*
 - (b) *construction, alteration, repair, maintenance, extension, demolition or dismantling of any works forming, or to form, part of the land, including (without prejudice to the foregoing) walls, roadworks, power-lines, electronic communications apparatus, aircraft runways, docks and harbours, railways, inland waterways, pipe-lines, reservoirs, water-mains, wells, sewers, industrial plant and installations for purposes of land drainage, coast protection or defence;*
 - (c) *installation in any building or structure of fittings forming part of the land, including (without prejudice to the foregoing) systems of heating, lighting, air-conditioning, ventilation, power supply, drainage, sanitation, water supply or fire protection, or security or communications systems;*
 - (d) *external or internal cleaning of buildings and structures, so far as carried out in the course of their construction, alteration, repair, extension or restoration;*
 - (e) *operations which form an integral part of, or are preparatory to, or are for rendering complete, such operations as are previously described in this subsection, including site clearance, earthmoving, excavation, tunnelling and boring, laying of foundations, erection, maintenance or dismantling of scaffolding, site restoration, landscaping and the provision of roadways and other access works;*
 - (f) *painting or decorating the internal or external surfaces of any building or structure.*



Section 105(2) details a number of operations that are not construction operations for the purposes of Part II. The exceptions relate to oil and gas and mining, both underground and opencast; certain specified operations on a site where the primary purpose is nuclear processing, power generation, water or effluent treatment or the production, transmission, processing or bulk storage (other than warehousing) of chemicals, pharmaceuticals, oil, gas, steel or food and drink; the manufacture or delivery to site of components or equipment where the contract does not also provide for their installation; and the making, installation and repair of wholly artistic works. The scope of excluded operations insofar as applicable to works at power stations was considered in the case of *North Midland Construction plc v. AE & E Lentjes UK Ltd* (2009).

1.2.3 Excluded contracts

Section 106 provides that contracts with residential occupiers are excluded from the operation of Part II of the 1996 Act, as is any other description of construction contract excluded by order of the Secretary of State (or in Scotland, the Scottish Ministers).

A construction contract with a residential occupier is one which principally relates to operations on a dwelling which one of the parties to the contract occupies, or intends to occupy, as his residence.

The term 'dwelling' means a dwelling-house or a flat; and for s.106(2) 'dwelling-house' does not include a building containing a flat and 'flat' means separate and self-contained premises constructed or adapted for use for residential purposes and forming part of a building from some other part of which the premises are divided horizontally. In itself, section 106 is self-explanatory. However, it should be noted that a residential occupier cannot be a limited company for the purposes of this section, see *Absolute Rentals Ltd v. Gencor Enterprises Ltd* (2001).

The Construction Contracts (Scotland) Exclusion Order 1998 ('the 1998 Order') came into force with Part II of the 1996 Act on 1 May 1998. This excluded from the scope of Part II of the 1996 Act project agreements under the Private Finance Initiative (PFI) (provided certain criteria were met) but not sub-contracts such as the construction contract and facilities management or operation and maintenance contract. One of the amendments to the 1996 Act referred to in section 1.2.1 above was the introduction of section 110(1A) which prohibits payment provisions in construction contracts which are conditional on the performance of obligations under another contract or a decision by any person as to whether obligations under another contract have been performed. To avoid this prohibition applying to first-tier sub-contracts under PFI projects and thus prohibiting what are commonly known as 'equivalent project relief' clauses in such sub-contracts, the Construction Contracts (Scotland) Exclusion Order 2011 excludes from the operation of section 110(1A) a construction contract if it is a contract pursuant to which a party to a relevant contract (i.e. excluded by the 1998 Order) has subcontracted obligations under that contract to carry out construction operations.

Certain development agreements are also excluded from the operation of Part II under article 6 of the 1998 Order. A contract is a development agreement if it includes



1.3 Parties involved in a construction project

5

provision for the grant or disposal of a relevant interest in the land on which take place the principal construction operations to which the contract relates.

A relevant interest in land means either ownership or a tenant's interest under a lease for a period which is to expire not earlier than 12 months after the completion of the construction operations under the contract.

In *Captiva Estates Ltd v. Rybarn Ltd (In Administration)* (2006), Captiva entered into a contract with Rybarn to construct 28 flats. Captiva owned the land on which the development was to take place. The contract provided that, as consideration for the works, Captiva would pay Rybarn and would also grant to Rybarn an option to purchase leases in respect of 7 of the 28 flats. The question arose as to whether the contract was a development agreement within the meaning of the English equivalent to the 1998 Order. The court held that the definition of a 'development agreement' in the 1998 Order is wide and the contract was caught by it.

1.2.4 Agreements in writing

Section 107 of the 1996 Act as originally enacted provided that Part II only applied to agreements in writing or evidenced in writing or recorded by one of the parties or a third party who has been duly authorized to do so. However, this was repealed with effect from 1 October 2011 in England and 1 November 2011 in Scotland, which means that oral contracts may now be subject to Part II of the 1996 Act. This does not, however, avoid the practical difficulty of proving the terms, or even the existence, of an oral contract in the first place.

1.3 Parties involved in a construction project

The parties involved in a building project can vary considerably depending on the nature and complexity of the project. At one end of the scale, a private individual may engage a joiner, electrician or builder to carry out work to his home. In such an instance, the employment of anyone other than the tradesman or builder may not be necessary. At the other end of the scale, major projects, such as the construction of public buildings, motorways, hotels or power stations, can involve a considerable number of parties from different professional and non-professional disciplines. It is therefore crucial to identify, particularly in a large project, the parties involved in that project, the terms of their respective appointments, the scope of each individual's involvement, and their roles within the project. The following parties are commonly involved in building projects:

1.3.1 Employer and consultants

The term 'employer' is used throughout this book as meaning the party for whose benefit the building works are being carried out. This is the term generally used in the standard form building contracts and associated documentation. Other terms such



as ‘the owner’, ‘the client’ or ‘the authority’ are also sometimes used. The employer usually assembles the advisory team, though there is no obligation to do so (see obligations of employers in Chapter 4) and smaller projects often do not require the involvement of anyone other than the employer and the contractor. The nature of the team varies depending upon the nature of the project and the choice of procurement method. In the case of a large project, the team may consist of an architect, civil and structural engineer, mechanical and electrical engineer, quantity surveyor, construction design and management (CDM) co-ordinator, one or more specialist consultants depending on the nature of the project, such as environmental consultant, acoustic consultant, etc., and possibly a project manager, a clerk of works and a BIM information manager (see Section 1.7). The team will also vary depending on the procurement method chosen, e.g. design and build, and may also be transferred at a later stage, at least in part, to the contractor in the case of novation (see Section 12.7). The terms of appointment of each member of the team are very important and must ensure that each member’s obligations are clearly defined. Where this is not done, difficulties can arise with unnecessary overlap of work or, more importantly, in crucial issues failing to be addressed by any of the members of the team due to lack of clarity as to allocation of responsibility. An example of the type of problem that can arise is to be found in the case of *Chesham Properties Ltd v. Bucknall Austin Project Management Services Ltd and Others* (1997).

To avoid this kind of situation arising, an employer may appoint a single entity as an integrated multi-discipline professional team. This can take the form of a single multi-discipline consultancy practice taking overall responsibility for a number of consultancy services and carrying these out in-house, or a single discipline practice, normally the architect, engaging directly with the employer for a range of services and then sub-contracting these to other firms, such as civil and structural engineers and mechanical and electrical engineers. This provides the employer with ‘one-stop’ responsibility on the part of the architect, since in such circumstances (unless the appointment expressly states otherwise), the architect will be responsible for the performance of the services, including any design, by those to whom he has delegated such performance under a sub-contract. In contrast, the architect will have no responsibility (subject again to the terms of the appointment) for the work of other consultants whom the employer has appointed directly.

It may not always be the architect who assumes this single point of responsibility, as it is not uncommon for a project manager to enter into an appointment with the employer, which includes not only project management and CDM co-ordinator services, but also the full range of design services and, in turn, to sub-contract the design services to others. This is indeed the model used for the project manager-led integrated design team services which may be procured under the Government Procurement Services ‘Buying Solutions’ framework (see Section 1.4.9). In a design and build scenario, the design sub-consultants’ appointments may in due course be novated to a contractor, with the project manager’s appointment remaining with the employer.

In relation to novation of design appointments, see Section 12.7. It should also be borne in mind that though the most common practice in design and build contracts is for the employer’s design team to be novated to the contractor, it is not unusual



1.3 Parties involved in a construction project

7

for the contractor to form its own design team by engaging sub-consultants directly. In practice, the more advanced the design at the time the contractor is appointed, the greater the likelihood of novation being appropriate.

The roles of the most commonly used consultants in construction projects are briefly described below, including the forms of consultant appointment produced by the relevant professional body. However, in many cases (and in almost all cases where the appointment is subject to the public procurement regime), the form of appointment will be selected by the employer. That is often a bespoke form of appointment rather than the professional body's standard form, though the use of the NEC3 Professional Services Contract has gained considerable popularity.

1.3.2 Architect

In a traditional building contract, it is the architect who usually has overall responsibility for the project from its conception to its conclusion. An architect is the agent of their client (in most cases, the employer, but under a design and build contract following novation, the contractor) and the general law of Scotland in relation to agency applies to their actions. The scope of their actual authority depends upon the terms of the agreement, comprising the appointment by their client.

Chartered architects in Scotland may be members of the Royal Incorporation of Architects in Scotland (RIAS) and/or the Royal Institute of British Architects (RIBA). The RIAS is a charitable organization founded in 1916 as the professional body for all chartered architects in Scotland. It is independent of the RIBA though it consults with the RIBA on UK-wide professional issues. The RIAS produces a suite of five Appointment documents, most recently revised in November 2011: SCA 2000; Sub Consultant Form of Appointment; ASP 2005 (Small Projects); Design and Build Appointment DBE/2000 (where the client is the employer); and Design and Build Appointment DBC/2000 (where the client is the contractor). The RIBA also publishes its own suite of contract documents for the appointment of architects, consultants and sub-consultants, the most recent edition of which is known as the RIBA Agreement 2010 (2012 Revision).

In a conventional building project, the architect will normally work in conjunction with the structural engineer, the former being engaged to produce at the initial stages the plans and elevations and an outline design, whereas the latter will be responsible for the design of the sub-structure and load-bearing elements of the building and for producing structural calculations and drawings. In May 2013, the RIBA launched a fairly radical change to its 'Plan of Work' which set out a recognized model for the building design and construction process, split into a number of stages, identified as A–L. The RIBA Plan of Work 2013 (endorsed by the RIAS) replaces these stages A–L with a new list of eight stages (along with eight 'task bars'). The stated intention is to align these stages with the unified industry stages agreed with the Construction Industry Council (CIC). The wider aim of the new Plan of Work is to cover the various procurement routes, to emphasize the project team as a whole, including client, contractors and designers, and to integrate building information modelling (BIM) into the work process.



The eight stages contained in the RIBA Plan of Work 2013 are:

- Stage 0 – Strategic Definition
- Stage 1 – Preparation and Brief
- Stage 2 – Concept Design
- Stage 3 – Developed Design
- Stage 4 – Technical Design
- Stage 5 – Construction
- Stage 6 – Handover and Close Out
- Stage 7 – In Use.

The architect may also, if so appointed by the employer, act as certifier under the building contract and will normally fulfil that role as contractor administrator under the SBC (but not the SBC/DB). In exercising the role of certifier, the architect will have a duty of care to the employer (see below) but will not normally owe any duty of care to the contractor (*Pacific Associates v. Baxter* (1980)). For a full description of the role and responsibilities of the certifier, see Section 7.6.

The architect's duty to the employer in the performance of his obligations in relation to both design activities and other services under the appointment, as with any other professional consultant or adviser, is to use reasonable skill and care. Where the professional holds himself out as having a special skill, such as in the case of an architect, the standard of care is that of the ordinary skilled man exercising and professing to have such a skill (*Bolam v. Friern Hospital Management Committee* (1957)). In many cases this duty of care will be expressly set out in the appointment, but in the absence of such an express term, it will nonetheless be implied. That same standard will apply to the architect's duty of care to the employer where he is carrying out the function of certifier under the building contract on behalf of the employer. On the other hand, a stricter duty than that of exercising reasonable skill and care may, by agreement, be imposed on the architect by an express term to that effect. This will generally be resisted by the architect as his professional indemnity insurance will normally cover only acts of 'negligence', i.e. breaches of the common law duty of reasonable skill and care and not a breach of a higher contractual duty. It is also possible that a stricter 'fitness for purpose' duty may be implied as matter of fact on the appointment by the particular circumstances and what is demonstrated to be the common intention of the parties (*Greaves & Co (Contractors) Ltd v. Baynham Meikle & Partners* (1975)).

1.3.3 Quantity surveyor

A quantity surveyor may be engaged by the employer to discharge specific functions. These tend to be of a financial nature and can include, for example, acting as cost consultant in preparing cost estimates, preparing bills of quantities, valuing work done for the purposes of both interim and final certificates, ascertaining direct loss and expense under the provisions of the building contract, and preparing the final account. Like architects, chartered surveyors are members of a professional organization, in this case the Royal Institution of Chartered Surveyors (RICS), which was founded in 1861.



1.3 Parties involved in a construction project

9

It is now a world-wide organization, with RICS Scotland being one of the four UK regional divisions. The RICS produces a suite of documents for consultancy appointments. This consists of the core appointment (either the standard form of consultant's appointment or the short form of consultant's appointment, in each case with a separate version for use in Scotland) along with a standard schedule of services relevant to the appropriate discipline, i.e. building surveyor services, CDM co-ordinator services, employer's agent services, project manager services, project monitor services, and quantity surveyor services.

The various schedules of service mentioned above illustrate that the role of the chartered surveyor in a project may not be limited to the traditional, albeit still essential, role of quantity surveyor, but has expanded into other areas such as project management.

The traditional principal role of the quantity surveyor is to value the work carried out by the contractor, and not to inspect that work for quality (*Sutcliffe v. Chippendale & Edmondson* (1982)). This was clarified in the case of *Dhamija v. Sunningdale Joineries and Others* (2010) in which Coulson J held that a quantity surveyor is concerned with quantities, not the quality of the work, and that it was for the architect to advise the quantity surveyor, and not for the quantity surveyor to see for himself, any defective work which should be excluded from the valuation.

1.3.4 Engineer

Historically, contracts for the construction of infrastructure such as roads, tunnels, railways or bridges, where the design process is led by the civil engineer rather than the architect, have generally been known as engineering contracts (as opposed to contracts for 'buildings'). In a traditional engineering contract, the engineer normally undertakes design responsibility and carries out a similar administrative role to that of the architect under a building contract, such as the certification of payments and of completion. The relevant UK professional organization for civil engineers is the Institution of Civil Engineers (ICE). There are also business associations for the consultancy and engineering industry such as the Association for Consultancy and Engineering (ACE), which in turn is represented on the European Federation of Engineering Consultancy Associations (EFCA) and the International Federation of Consulting Engineers, or *Fédération Internationale des Ingénieurs-Conseils* (FIDIC).

The Civil Engineering Contractors Association (CECA) is a representative association for the UK civil engineering contractors. The CECA in Scotland represents over 100 civil engineering contractors, ranging in size from small rural contractors to multinationals.

While civil engineers are concerned primarily with structures and the physical environment, mechanical engineers (almost invariably conjoined with electrical engineers and often referred to in that combined role as building services consultants) are responsible for the mechanical and electrical systems in a building. The professional institution in the UK for mechanical engineers is the Institution of Mechanical Engineers (IMechE), while the equivalent body for electrical engineers is the Institution of Engineering and Technology (IET) which was formed in 2006 by the merger of the



Institution of Electrical Engineers (IEE) and Institution of Incorporated Engineers (IIE). The Chartered Association of Building Services Engineers (CIBSE) is the business organization that promotes building services engineers. This was formerly the Institution of Heating and Ventilating Engineers and was granted its Royal Charter in 1976.

In a typical building contract (as opposed to an engineering contract), the specialist consultant engineering input will be provided to the employer by the structural engineer and the mechanical and electrical (M&E) (or building services) engineer. As mentioned in Section 1.3.2, the structural engineer's role is normally the design of the sub-structure and load-bearing elements. The M&E consultant will be responsible for specifying the required mechanical and electrical installations and the outputs and performance standards, while in more complex projects the detailed M&E design will be the responsibility of specialist M&E sub-contractors engaged directly by the main contractor.

A recent case has considered the extent to which a structural engineer was entitled to rely on advice obtained from a specialist subcontractor in producing a soil stabilization performance specification for the purposes of construction of a new supermarket. In the event, the floor slab suffered differential settlement as a consequence of the ground under the floor slab not being improved enough. The employer, the supermarket owner, contended that the engineers could not avoid liability by arguing that they were entitled to rely on the advice of the specialist subcontractors. However, the court held that it was not a question of whether the engineers had delegated their duty to the subcontractors but whether they had acted with reasonable skill and care in relying on advice from a specialist subcontractor instead of carrying out their own assessment. The court held that a construction professional could discharge its duty to take reasonable care by relying on the advice or design of a specialist provided that it acts reasonably in doing so. In the circumstances of the case the engineers had acted reasonably in doing so, and would not have been in breach of their duty of care even if even the advice of the specialist had been negligent (*Cooperative Group Ltd v. John Allen Associates Ltd* (2010)).

1.3.5 Specialist consultants

In large building projects, employers often employ specialist consultants to advise on specific areas, for example, planning consultant, environment and sustainability consultant, fire consultant, landscape architect, heating and ventilation consultant, lift consultant, interior and space consultants, transport consultant. In most cases a CDM co-ordinator will require to be appointed. See Section 1.7 in relation to a BIM Information Manager and Section 1.8 on GSL Lead or Champion in respect of 'Soft Landings'. The CIOB Complex Projects Contract 2013 referred to in Section 1.4.8 introduces a new role of 'Project Time Manager' to review progress, advise the employer's team on programming and work with the contractor to identify measures to recover delay. Additionally, the trend in recent years for building owners to demand that completed projects achieve a specified BREEAM rating has resulted in the emergence of the BREEAM consultant as a specialist. BREEAM (i.e.



1.3 Parties involved in a construction project

11

the BRE Environmental Assessment Method) is a means of assessing the overall environmental performance of new and existing buildings. In order to achieve one of the ratings of Pass, Good, Very Good, and Excellent, a minimum number of points must be achieved.

1.3.6 Project manager

Depending upon the size of the building contract and the method of procurement, the employer may decide to engage a project manager. Although in the past a project manager in the construction context tended to be found only in a construction management contract (see Section 1.4.1), the role is nowadays found in all types of construction procurement and normally covers the management and coordination of the tender process and the works, including advising on procurement strategy and risks, coordinating the preparation of tender documents and assessment of tenders, producing contract documents, programming and monitoring of progress. Ultimately, however, the exact scope and extent of the duties will be determined by the terms of the appointment. The role of the Project Manager acting as contract administrator is recognized in NEC 3 and a project manager is often appointed by the employer to undertake the role of employer's agent in SBC/DB. The extent of the project manager's responsibilities to their client has been considered in a number of recent cases. In *Sweett (UK) Limited v. Michael Wight Homes Limited* (2012), the employer's agent's appointment imposed an express duty on it to 'prepare contract documentation and arrange for such documents to be executed'. The contractor was contractually obliged to provide a performance bond but went into liquidation after commencing work without having done so. The court rejected the employer's contention that the consultant was under an absolute obligation to arrange execution of the performance bond by the contractor and held that their duty was limited to using reasonable care to ensure it was provided. In the circumstances the consultant had fulfilled that duty. In contrast, in *The Trustees of Ampleforth Abbey Trust v. Turner & Townsend Project Management Limited* (2012), the project manager was held to have breached their duty to use reasonable care to ensure execution of the building contract by the contractor. The project manager had instead issued a series of letters of intent and had failed to warn the employer of the limited protection afforded by such letters as compared to a formal contract. As a consequence of the absence of a formal contract, the employer was unable to apply liquidated damages for delay against the contractor, and the court held the project manager liable to the employer for that loss.

1.3.7 Clerk of works

A clerk of works is generally employed on site by either the employer or the architect to act as construction inspector, oversee the execution of the works, and monitor compliance with the required contract standards. There is a professional body for clerks of works known as the Institute of Clerk of Works and Construction Inspectorate of Great Britain Inc (ICWCI). Clause 3.4 of SBC expressly permits the Employer



to appoint a clerk of works whose duty is to act solely as inspector on behalf of the Employer under the directions of the Architect/Contract Administrator. The clerk of works cannot give any direction to the Contractor unless it is in regard to a matter in respect of which the Architect/Contract Administrator is expressly empowered by the Contract to issue instructions and the direction must be confirmed in writing by the Architect/Contract Administrator within two working days of being given. The corresponding role is carried out under NEC3 by the 'Supervisor' whose duties include the carrying out of tests and inspections, instructing the Contractor to search for defects, notifying the Contractor of defects, and issuing the defects certificate.

1.3.8 Contractor

Once an employer has decided upon the nature and extent of the work which they wish carried out (possibly with the assistance of the architect, quantity surveyor and/or project manager), they will usually invite one or more contractors to tender for the work. Where the employer is a contracting authority or a utility for the purposes of public procurement law (see Chapter 2), the mandatory rules in respect of competitive tendering will of course apply. The obligations of contractors under a building contract are considered in Chapter 5.

1.3.9 Sub-contractors

Often, and almost invariably in major projects, elements of the work are executed not by the main contractor itself but by sub-contractors or even sub-sub-contractors. These may include 'domestic sub-contractors' (chosen by the main contractor normally with the employer's consent); specialist contractors pre-named by the employer (which is not the same as nominated) or 'works contractors' (under a management contract). In the past these could also have included nominated sub-contractors.

The position of sub-contractors under a building contract is considered in Chapter 11.

In addition to the principal parties referred to above, other parties may have a role in a building project such as suppliers, insurers, funders, prospective tenants and purchasers of the building.

1.3.10 Experts

Some specialist consultants may be considered experts in their field. The use of expert witnesses in complex construction disputes is commonplace. An expert should act objectively and independently to avoid being viewed as no more than a hired gun. The expert witness or, to give him his proper title under Scots law, the 'skilled witness', is through practice or study, or both, specially qualified in a recognized branch of knowledge. A number of professional consultancy bodies, e.g. RIAS maintain a list of accredited expert witnesses.



1.3 Parties involved in a construction project

13

The duties and responsibilities of experts in civil cases in England were set out in detail by Mr Justice Cresswell in *National Justice Compañía Naviera SA v. Prudential Assurance Co. Ltd* ('*The Ikarian Reefer*') (No. 1) (1993). These include the following:

- Expert evidence presented to the court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation, see *Whitehouse v. Jordan* (1981).
- An expert witness should provide independent assistance to the court by way of objective, unbiased opinion in relation to matters within his expertise, see *Polivitte Ltd v. Commercial Union Assurance Co. Plc* (1987) and *Re J (Child Abuse: Expert Guidance)* (1991). An expert witness should never assume the role of an advocate.
- An expert witness should state the facts or assumption upon which his opinion is based. He should not omit to consider material facts which could detract from his concluded opinion, see *Re J* (1991).
- An expert witness should make it clear when a particular question or issue falls outside his expertise.
- If an expert's opinion is not properly researched because he considers that insufficient data is available, this must be stated with an indication that the opinion is no more than a provisional one, see *Re J* (1991). In cases where an expert witness who has prepared a report could not assert that the report contained the truth, the whole truth and nothing but the truth without some qualification, that qualification should be stated in the report, see *Derby & Co. Ltd and Others v. Weldon and Others* (No. 9) (1990).
- If, after exchange of reports, an expert witness changes his view on a material matter having read the other side's expert's report or for any other reason, such change of view should be communicated (through legal representatives) to the other side without delay and when appropriate to the court.
- Where expert evidence refers to photographs, plans, calculations, analyses, measurements, survey reports or other similar documents, these must be provided to the opposite party at the same time as the exchange of reports.

These principles were subsequently approved by the Court of Appeal in *Stanton v. Callaghan* (2000).

In *Anglo Group plc v. Winther Browne & Co Ltd* (2000) it was said that the *Ikarian Reefer* analysis described above needed to be extended in accordance with the Woolf reforms of civil procedure in England. It set out the following analysis:

- An expert witness should at all stages in the procedure, on the basis of the evidence as he understands it, provide independent assistance to the court and the parties by way of objective unbiased opinion in relation to matters within his expertise. This applies as much to the initial meetings of experts as to evidence at trial. An expert witness should never assume the role of an advocate .
- The expert's evidence should normally be confined to technical matters on which the court will be assisted by receiving an explanation, or to evidence of common professional practice. The expert witness should not give evidence or opinions as



to what the expert himself would have done in similar circumstances or otherwise seek to usurp the role of the judge.

- He should co-operate with the expert of the other party or parties in attempting to narrow the technical issues in dispute at the earliest possible stage of the procedure and to eliminate or place in context any peripheral issues. He should co-operate with the other expert(s) in attending without prejudice meetings as necessary and in seeking to find areas of agreement and to define precisely areas of disagreement to be set out in the joint statement of experts ordered by the court.
- The expert evidence presented to the court should be, and be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of the litigation.
- An expert witness should state the facts or assumptions upon which his opinion is based. He should not omit to consider material facts which could detract from his concluded opinion.
- An expert witness should make it clear when a particular question or issue falls outside his expertise.
- Where an expert is of the opinion that his conclusions are based on inadequate factual information, he should say so explicitly.
- An expert should be ready to reconsider his opinion, and if appropriate, to change his mind when he has received new information or has considered the opinion of the other expert. He should do so at the earliest opportunity.

In England, guidelines in respect of expert witnesses are now embodied in Part 35 of the Civil Procedure Rules 1998 and the relative Practice Direction. The 'Civil Justice Council Protocol for the Instruction of Experts to give Evidence in Civil Claims' contains guidance on best practice with regard to compliance with Part 35 of the Civil Procedure Rules and with the overriding objective that courts deal with cases justly.

In Scotland, there are presently no court rules in relation to the conduct of expert witnesses. The principles set out in the *National Justice Compañía Naviera SA* case have been referred to by the Scottish courts, with approval, in *Elf Caledonia Ltd v. London Bridge Engineering Ltd and Others* (1997) (one of the cases arising from the Piper Alpha disaster). Lord Caplan described the formulation of an expert's duties in *National Justice Compañía Naviera SA* as being helpful and correct. Certain observations, consistent with the principles set out in the *National Justice Compañía Naviera SA* case, were also made in *McTear v. Imperial Tobacco Ltd* (2005).

Certain professional bodies, for example, the RICS in Scotland, produce guidance for their members when acting as expert witnesses. The RICS Practice Statement 'Surveyors Acting as Expert Witnesses' applies to RICS members providing expert evidence to a tribunal. It follows similar principles to the court rules and procedures:

- The overriding duty is to the tribunal.
- That duty overrides any duty to the client.
- It involves setting out facts fully and giving truthful, impartial and independent opinions covering all relevant matters and whether or not they favour the client.



1.4 Types of construction contract

15

Up until recently it was thought that an expert was immune from any claim for negligence on the part of his client. However, this immunity (at least in certain cases) no longer applies following the decision of the Supreme Court in the English appeal of *Jones v. Kaney* (2011).

Some guidance as to the duty of an expert in a construction dispute litigation was recently given by the court in the English case of *Walter Lilly & Company Ltd v. Mackay and DMW Developments* (2012). The court in particular considered the correct approach to expert evidence on demonstrating delay and the meaning of practical completion. In addition, it was not for an expert to stray into legal matters, for instance, basing a report simply on the premise that the other side had not proved its case. See also *National Museums and Galleries on Merseyside (Trustees of) v. AEW Architects and Designers Limited* (2013), which reinforces the importance of an expert being truly independent.

1.4 Types of construction contract

Before issuing an invitation to tender or selecting a contractor, the employer will need to consider the appropriate type of construction contract and form of contract to be adopted. The contract documents are generally prepared on the advice of the project manager, architect or quantity surveyor, or in the case of complex procurement, by legal advisers. Where the building contract is being competitively tendered, the form of contract should be included in the invitation to tender issued to tenderers.

1.4.1 Procurement routes

There is a variety of different types of contractual arrangement which can be chosen. In smaller projects the contract may comprise simply a quotation by the contractor which is accepted, with or without qualification, by the employer. The quotation may have standard terms and conditions attached to it. The parties may negotiate over the incorporation of all, or part of, the standard terms and conditions into their contract. On the other hand, the perception of those within the construction industry is probably that the contracts regulating larger projects have become more and more complex over the years. The procurement route and type of contract chosen by the employer will to a large extent depend on the employer's key priorities, and the circumstances of the proposed project, such as speed, certainty of cost, and status of design.

Under traditional procurement, responsibility for the design process remains separate from the construction process. The contractor usually has no design responsibility and its obligations are limited to the execution of the works and the provision of materials to a design provided by the employer, unless it is contracted to design a specific part of the works, known in the JCT/SBC contracts as a 'Contractor's Designed Portion'. The contract is usually administered by the employer's professional team.

Nowadays, the most common type of procurement route in major projects is probably that of design and build, in which the contractor undertakes both the design and



the construction of the works in return for a lump sum price. The contractor may appoint his own design team though often their appointments will initially have been made with the employer and then novated to the contractor.

A third common type of procurement route is that of 'management' which can be one of, or a combination of, management contracting, construction management and 'design and manage'. Under management contracting, the overall design of the works is the responsibility of the employer's design team. The employer appoints a management contractor who is responsible for managing the carrying out of the works by works contractors appointed by the management contractor under a number of works contracts for the various packages comprised in the works. The management contractor manages the overall process. Normally the management contracting route is used to allow a contract to be let where design is at an early stage so that design and construction can proceed in parallel along with the procurement of the works packages as and when appropriate in accordance with the programme. On the other hand, this usually means a loss of cost certainty for the employer, as even though the works packages will be procured competitively, the final prices will become known only after contract commencement. Under construction management, the employer appoints a design team and a construction manager. Unlike a management contractor, a construction manager does not appoint the contractors who actually carry out the works; instead those contractors (known as trade contractors) are appointed by the employer. The management of the construction process is performed by the construction manager on the employer's behalf. Under 'design and manage' procurement, the management contractor is not only responsible for managing the works packages but also for the design team.

1.4.2 Lump sum contracts

A lump sum contract is a contract in which the contractor agrees with the employer to carry out the building works for a pre-agreed price. The price is subject to adjustment only in certain limited circumstances specified in the contract, such as variations, employer default and other events (if any) which are expressly stated in the contract as being an employer risk, expenditure of provisional sums and (if applicable) inflation-related fluctuations in costs. The characteristics of a lump sum contract can apply to both design and build and traditional contracts. A contract using bills of quantities will be a lump sum contract if the bills are fully measured at the time the contract is entered into.

1.4.3 Measurement contracts

In this type of contract the sum payable by the employer to the contractor is determined by measuring the work done on completion of the project and by applying quantities to agreed rates or some other form of valuation. An example is a contract based on bills of approximate quantities, where the quantities cannot be accurately measured in advance of the contract being entered into.



1.4 Types of construction contract

17

1.4.4 Cost reimbursement and prime cost contracts

There are different types of such contracts such as cost contracts, cost plus contracts and prime cost contracts, but the common feature is that the sum which the employer pays the contractor is not a pre-agreed sum but a sum calculated by reference to the actual cost of the works carried out, generally with the addition of an amount to cover profit and a management fee. This may be a predetermined percentage of the costs, a predetermined fixed fee or a variable fee calculated according to a predetermined formula. An example of this type of contract is the NEC3 Option E (see Section 1.6). It is also common to combine the principles of a cost reimbursable contract with a 'target price' contract (e.g. the NEC3 Options C and D) under which costs will be reimbursable up to the level of a target figure. If the final actual costs are less than the target, the contractor is entitled to a share of the savings calculated under a pre-agreed pain/gain share mechanism, whereas if the final actual costs exceed the target, that same pain/gain share mechanism will require the contractor to bear a share (which may be 100% if the contract so provides) of the excess.

1.4.5 Turnkey contracts

This term is sometimes used for certain types of design and build contracts, usually where certainty of final price and completion date are of particular importance, for example, where such certainty is demanded by private finance providers. Under this type of contract, the contractor undertakes a more onerous risk profile than under a standard design and build contract (though that does not mean that the contractor assumes all risk; risks such as force majeure will normally at least be shared). This type of contract is also commonly called an EPC contract (engineer, procure and construct). In the case of a process plant, power plant, or wind turbine project or the like, the contract will normally require the completion of commissioning and the achievement of performance tests to demonstrate compliance with the stipulated performance criteria in order to allow the operational phase to commence, backed up by performance liquidated damages in the event of failure. The European International Contractors (EIC) published the EIC Turnkey Contract in May 1994. FIDIC has also published turnkey contracts, beginning in 1995 with its 'Orange Book' entitled *Conditions of Contract for Design-Build and Turnkey*. This was replaced in 1999 by the *Conditions of Contract for Plant and Design-Build* (the 'Yellow Book') and the *Conditions of Contract for EPC/Turnkey Projects* (the 'Silver Book').

1.4.6 Two-stage tendering

This method of procurement is becoming more prevalent and its key characteristic is to involve the contractor at an early stage before completion of the design and before fully priced tenders have been obtained. The intention is to allow the contractor to collaborate with the employer and their consultants in the design and procurement process. This procurement method is normally only used with design and



build contracts. The first stage tender is based on an outline design by the employer's professional team and the competitive element relates to the amount of preliminaries, the overhead and profit percentage and the pre-contract fee. Normally, the preferred bidder will enter into a pre-contract agreement to include the development of design and procurement of sub-contract packages. The SBCC has recently published two forms of pre-construction agreement. The Pre-Construction Services Agreement (General Contractor) for use in Scotland (PCSA/Scot 2013) is for a two-stage tendering process where the proposed main contract is SBC (Scottish Building Contract), SBC/DB, SBC Minor Works or JCT (Joint Contracts Tribunal) Major Projects. The Pre-Construction Services Agreement (Specialist) for use in Scotland (PCSA/SP/Scot 2013) is for a two-stage tendering process on a substantial or complex project where the party entering into the pre-construction agreement with the employer is a specialist who will in due course enter into a sub-contract with the main contractor, once appointed, and whose tender to the employer may subsequently be assigned to the main contractor.

Ideally the tenderers under a two-stage procedure should be committed to the amount of the tendered preliminaries, etc. and the work packages are then procured competitively and transparently so that there is no scope for negotiation. The risk for the employer is that the outstanding matters cannot be agreed during the second stage with the result that the process must be commenced from scratch. The two-stage tendering process may be combined with a form of guaranteed maximum price (GMP), where the contractor bids the GMP and takes the risk of the total amount of work packages subsequently exceeding that GMP. While two-stage tendering is sometimes used in public sector contracts, care needs to be taken to follow the EU public procurement rules, particularly if the restricted procedure applies, as the contracting authority cannot allow the second stage to develop into a negotiation. This would clearly infringe the requirements of the restricted procedure. Procurement is considered in Chapter 2.

It is possible that the growing popularity of two-stage tendering in time-critical major projects will increase in cases where BIM is used, in order to engage the contractor at an early stage in the development of the BIM model, see Section 1.7.

1.4.7 Joint ventures

This type of arrangement is now a very common method of procurement. A special purpose company or partnership is created by two or more parties (often a land owner and a developer), each contributing their respective assets, funds and/or skills with a view to procuring a construction project. The joint venture company/partnership will become the employer for the purposes of the building contract.

1.4.8 Partnering and alliancing

In the last twenty years or so there has been a perceived desire within the construction industry to move away from a confrontational and adversarial culture to a collaboration culture, with the objective of creating common goals between parties



1.4 Types of construction contract

19

to the project and an understanding of each party's expectations and values. This is largely a product of two ground-breaking reports of the 1990s, *Constructing the Team* by Sir Michael Latham in 1993, and *Rethinking Construction* by a committee chaired by Sir John Egan in 1998. This has in turn led to a movement towards partnering contracts. Generally speaking, partnering aims to foster a sense of commitment to a project, to emphasize mutual goals and objectives, and to promote equity, trust, co-operation and fair dealing. The supposed consequential benefits of partnering include savings in time and cost, improved quality and fewer defects, and reduced risk of disputes. It is probably fair to say that partnering was initially regarded with some scepticism due to the arguably vague targets often included in partnering 'charters' and the somewhat aspirational wording used in these charters, which in most cases were non-binding. However, since the introduction in September 2000 of the ACA Standard Form of Contract for Project Partnering (PPC 2000), which was the first standard form of project partnering contract, there has been a growing tendency for partnering concepts to be incorporated as part of the contract itself rather than as a procedural overlay (as in the case of a partnering charter). A Scottish supplement has been published to accompany PPC 2000 and PPC 2000 was itself revised in 2003 and 2008, with a further amendment in 2011 to address the changes to the 1996 Act. The key features of PPC 2000 are as follows:

- PPC 2000 is a multi-party contract; not only do the client and the contractor enter into the contract, but also the client's representative and any consultants appointed by the client, and possibly certain specialists (who are sub-contractors appointed by the contractor).
- PPC 2000 contains various processes covering the period prior to construction on site, and assumes the selection of the contractor on the basis of quality rather than a lump sum price. Indeed, the parties are obliged to work together to arrive at an agreed maximum price, rather than a lump sum price being fixed at the very outset.
- PPC 2000 provides for the supply chain to be finalized, so far as possible, on an open book basis, encouraging partnering relationships with the specialist appointed by the contractor. Those specialists may themselves become full members of the partnering team, in which case they execute a joining agreement.
- The contractor is obliged to submit a business case to the client in respect of those parts of the work that it wishes to undertake directly by package or by the appointment of a specialist.
- PPC 2000 provides for a core group to be established, comprising key individuals representing partnering team members, who undertake regular previews of progress and performance and make decisions on certain matters.

Other standard form partnering contracts include:

- TPC 2005 (published by ACA and similar to PPC 2000, but for use with term contracts);
- Public Sector Partnering Contract (PSPC);
- NEC3 Secondary Option Clause X12: Partnering;
- JCT Constructing Excellence Contract 2011 and SBCC Constructing Excellence Contract 2006;



- CIOB Complex Projects Contract 2013. This new form published by the Chartered Institute of Building is intended for use in complex projects and imposes collaboration obligations on the parties in a more prescriptive manner than other forms.

In addition, the 2011 edition of the JCT and SBC contracts introduced a new optional supplementary condition as follows:

The Parties shall work with each other and with other project team members in a co-operative and collaborative manner, in good faith and in a spirit of trust and respect. To that end, each shall support collaborative behaviour and address behaviour which is not collaborative.

It could of course be argued that the very fact that this is only an optional clause indicates that a collaborative culture in the construction industry has not yet been fully achieved, and indeed some might suggest that the period since 2008 has seen a slow-down in the trend towards partnering along with a desire by employers to exploit the increased competitiveness in the market and the pressure on tender prices.

That said, a number of major employers have in recent years adopted a form of partnering contract, known as 'alliancing'. This form of procurement was originally adopted in the early 1990s in the UK oil and gas industry and was subsequently developed in major infrastructure projects in Australia, such as water projects, highways and dams, with the aim of avoiding the traditional client/contractor confrontational approach. The essence of an alliance contract is that the parties work together collaboratively in one integrated team and are bound by a risk/reward scheme which provides for a collective sharing of project risks and consequential savings or losses. This is in fact a step further than a partnering contract, since while the former focuses on cultural change in contractual relationships, the latter (at least in its true sense) aligns the parties' commercial and financial interests to the assumption of collective responsibility for the successful achievement of project goals.

A current UK example of alliancing is the Electricity Alliance operated by the National Grid, under which the gain share is calculated at the end of each year and divided among each regional partner based upon evidence of collaborative working, sharing best practice and driving efficiencies.

What is said to be the first UK rail sector example of a 'pure construction alliance' is the Stafford Area Improvement Programme on the West Coast Main Line, where a unified agreement was formed in early 2013 between Network Rail and the contractors and consultants, under which all parties share the benefits and risks under a 'one project, one organization' structure.

1.4.9 Framework contracts

Although framework contracts have been used for a number of years, their popularity, particularly in the public sector, has grown significantly since the late 2000s.



1.4 Types of construction contract

21

This is possibly linked to the removal of any lingering doubts as to the compliance of such contracts with public procurement rules by the express recognition of framework contracts in the EU Public Sector Procurement Directive (Directive 2004/18/EC, 31 March 2004) and in the Public Contracts (Scotland) Regulations 2006 (now consolidated under the Public Contracts (Scotland) Regulations 2012). Under a framework contract, the employer will procure either a single framework contractor or a panel of contractors (which, if subject to public procurement rules, must be a minimum of three). Individual contracts are then ‘called off’ under the terms governing the framework and if the framework consists of a panel of contractors, this is usually done by means of a ‘mini-competition’. In cases where the employer is subject to the public procurement or utilities regime, the appointments to the framework are subject to the procurement regulations (and recent cases emphasize the need for care in compliance, see Section 2.16). However, the attraction to a public sector employer of a framework contract is that the mini-competitions are not subject to the full public procurement regime and procedures, such as publishing a notice in the *Official Journal of the European Union* (OJEU) (though certain criteria set out in the relevant regulations must still be met and the overriding principles of non-discrimination and equality of treatment must be followed). A further attraction is that the framework can be set up by a ‘central purchasing body’ for the benefit of a number of different employers or categories of employers described in the OJEU notice, who can then make individual call-offs under that framework.

Current examples of frameworks include the wide-ranging ‘Buying Solutions’ set up by the Government Procurement Service (which extends throughout the UK); ProCure21+ set up by the Department of Health for NHS projects in England and Wales and the corresponding NHS Frameworks Scotland set up by NHS Scotland in 2008 and re-tendered in 2013 with five ‘principal supply chain partners’ for construction-related services for both new-build and refurbishment. Construction frameworks have also been formed in Scotland and the rest of the UK by a number of local authorities and housing associations.

The publishers of the standard forms have recognized the growth in the use of frameworks and standard framework agreements are included in both the NEC3 and JCT/SBC suites.

1.4.10 Term contracts

As the name suggests, a term contract subsists for a specific period, and is usually for the provision of services during that period. However, these services can often be construction-related, most commonly for the carrying out of both planned and reactive repairs and maintenance, for example, on behalf of local authorities and housing associations. One of the most commonly used forms of term contract for this purpose is TPC 2005, published by ACA. Standard form term contracts are also comprised in the JCT/SBCC and the NEC3 suites of contract (the SBCC Measured Term Contract 2011 (and its JCT equivalent); the NEC3 Term Service Contract and the NEC3 Term Service Short Contract).



1.4.11 Other forms

This book focuses on the SBCC and the NEC3 forms of contract (see Sections 1.5 and 1.6). However, a number of other bodies within the construction and engineering industries produce their own standard forms of contracts and associated documentation. For example, the Association for Consultancy and Engineering (ACE) and the Civil Engineering Contractors Association (CECA) operate the suite of Infrastructure Conditions of Contract (ICC) for use in civil engineering-related contracts. This includes, among others, a Measurement version, a Design and Construct version, a Term version, a Target Cost version, and a Minor Works version (and it should be noted that these will require to be adapted for use in Scotland). These are based on, and effectively replace, the ICE Conditions of Contract, which were first published by the Institution of Civil Engineers in 1945. However the Institution withdrew its co-sponsorship of the ICE Conditions in 2011 as part of its decision to solely endorse the NEC3 suite of contracts. The 'GC/Works' family of contracts is now published by the Stationery Office and remains in gradually diminishing use in the public sector, including a recent major new prison project in Scotland. The longevity of these contracts is perhaps surprising given the lack of up-to-date revisions. GCWorks/1 comprises quantities and without quantities (1998) and two-stage design and build (1999) versions.

The Institution of Chemical Engineers (IChemE) publishes forms of contract primarily for use in the design and construction of process plants. Since such plants are usually performance-based, the passing of performance tests as a pre-condition of completion is a key element of these contracts. The suite of contracts comprises both UK and international versions and the most widely used form in the UK is the 'Red Book' for lump sum contracts, the fifth edition of which was published in 2013. Other main contract forms are the 'Green Book' for cost reimbursable contracts and the 'Burgundy Book' for target cost contracts. IChemE also publishes international versions of each of these contracts.

The Institute of Engineering and Technology (IET) and the Institution of Mechanical Engineers (IMechE) jointly publish a suite of contracts, known as Model Forms, in relation to electrical, electronic or mechanical plant. MF/1 Revision 5 (2010) is for use in home (i.e. the UK) or overseas contracts for the supply and erection of electrical, electronic or mechanical plant. MF/2 (1999) is for home or overseas contracts for the supply only of such plant; MF/3 (2001) is for home contracts for the supply only of mechanical and electrical goods where no initial design or subsequent installation or commissioning is required; and MF/4 is for home or overseas contracts for the engagement of a consulting engineer.

The FIDIC forms of contract (see Section 1.4.5) are also being used in major domestic projects, the most noteworthy being the adoption of the Silver Book as the basis for the fixed price lump sum design and build bespoke contract for the Forth Replacement Crossing (now known as the Queensferry Crossing) entered into in May 2011. In addition to the Yellow Book and Silver Book mentioned in Section 1.4.5, FIDIC also publishes the Red Book – the Construction Contract (Conditions of Contract for Building and Engineering Works, Designed by the Employer) published in 1999. This is essentially a re-measurement contract.



1.5 *The SBCC forms of building contract*

23

A more detailed examination of the forms of contract mentioned above is beyond the scope of this book but any of these forms may well be appropriate, depending upon the nature of the project in question. In any event, before using any standard form, users should ensure that it meets the employer's needs and is properly integrated with the other documents forming the contract.

1.4.12 PFI and PPP

Although the Private Finance Initiative (PFI) and Public Private Partnerships (PPP) (and the Scottish Government's variants, the Non-Profit Distributing model (NPD) and the 'hub' model) are beyond the scope of this book, it must be recognized that there has been a rapid growth in this method of procurement of public sector building and infrastructure works since the mid-1990s. The construction contracts forming part of the package of project documents are normally bespoke contracts, the form and terms of which are largely dictated by a pass-through of the obligations under the overarching project agreement. The funding and risk transfer features of such projects, coupled with the construction/operational interface, have led to the development of practices and principles peculiar to the construction contracts used in these projects. As a result, such contracts need to be regarded as a quite distinct category of construction contract.

1.5 *The SBCC forms of building contract*

In Scotland, many building contracts are entered into on the Scottish Building Contract Committee (SBCC) standard forms. The constituent bodies of the SBCC are currently the Association of Consultancy and Engineering, the Association of Scottish Chambers of Commerce, the Convention of Scottish Local Authorities, the National Specialist Contractors Council – Scottish Committee, the Royal Incorporation of Architects in Scotland, the Royal Institution of Chartered Surveyors in Scotland, Scottish Building, Scottish Casec, the Scottish Government – Building Division, and the Law Society of Scotland.

The SBCC has produced standard forms since 1964. Over the years, the number of standard forms has increased and numerous revisions and amendments have been issued. These can make it difficult to identify the precise terms upon which parties have contracted. Matters are often further complicated by the attempts of employers and contractors to modify the provisions of the standard form contracts.

The first forms of contract published by JCT were the 1963 Editions and a major revision to these (JCT 80), was carried out in 1980 (when a Design and Build form was also published for the first time). This was followed by numerous Amendments. The form was then reprinted as a 1998 edition (JCT 98), again followed by various Amendments. 2005 saw the launch of new editions of practically every JCT contract. This was the most comprehensive revision of the whole suite of JCT contracts for many years.



The overhaul of the JCT contracts in 2005 was in response to calls for change following market research. The JCT found that the industry expressed a preference for integrated documents for use rather than core documents with a series of supplements. There was uncertainty about which form to use and which supplement was appropriate to each form.

The JCT's aim was to present contracts in a user-friendly way. It achieves that by producing stand-alone contracts without the use of supplements. Each contract contains information about the circumstances in which it is suitable for use and many have their own Guides containing additional explanatory information.

The structure of the contracts has been substantially overhauled with clauses being grouped into sections such as 'Payment' and 'Control of the Works', being renumbered, and with the wording substantially revised in line with an aim to use plainer, non-legalistic language.

Many clauses have been shortened and simplified, sometimes by defining terms which tend to require long explanations (such as 'Interest' and 'Insolvency') and sometimes by incorporation by reference of statutory provisions (such as the CDM Regulations and VAT legislation) or procedural rules (such as the adjudication provisions in the Scheme for Construction Contracts and arbitration rules).

Articles and Contract Particulars are all located at the front of the contract so that all project-specific sections which require to be filled in are grouped together. A number of default provisions are contained so that if the particulars are not properly completed, this does not leave a gap but the default situation is automatically applied.

Certain provisions have been deleted – Nominated Sub-Contractors and Suppliers, Performance Specified Work, Contractors' Price Statement and Insurance for Employer's Loss of Liquidated Damages no longer appear in the standard form. There are optional provisions to be chosen as required, such as sectional completion and Contractor's Designed Portion. These are provided for within the wording of the standard form without the need for separate supplements to be read into the main contract form. The 2005 Edition of the various contracts and subsequent revisions have been consolidated into the 2011 Edition, which also takes into account changes required as a consequence of the amendments made to the 1996 Act by the Local Democracy, Economic Development and Construction Act 2009 with effect in England and Wales from 1 October 2011 and in Scotland from 1 November 2011.

The SBCC have produced, currently as 2011 Editions, Scottish versions of the majority of the JCT forms. The practice of publishing these as Scottish Supplements to be read into the JCT form ceased with the 2005 Edition when they were produced as stand-alone contract documents for the first time. This was a welcome user-friendly development and the differences between the JCT and SBCC versions are limited to those required to bring the JCT contracts in line with Scots law, terminology and procedure. All section and clause numbering is common between equivalent JCT and SBCC contract forms.

The principal areas of difference between JCT and SBCC are the third party rights and the arbitration provisions. Third party rights relate to the ability to confer benefits on a person who is not party to the contract, and would typically be used in a construction context where collateral warranties would otherwise be required. In England and Wales, this is governed by the Contracts (Rights of Third Parties) Act 1999. This



1.6 *The NEC3 forms of contract*

25

Act does not apply in Scotland. In Scotland, the equivalent is the *jus quaesitum tertio*, a common law right. The contract contains provisions to make an election as to whether warranties are to be provided or whether this will be dealt with by way of third party rights. For more detail on third party rights generally, see Chapter 13.

In relation to arbitration, the difference between JCT and SBCC relates to the procedural rules incorporated.

There is a wide variety of SBCC standard forms of contract available and the Standard Building Contract Guide for use in Scotland (November 2011) identifies the documents published by the SBCC.

New contracts have been added to the suite of standard forms for both the JCT and SBCC, including Minor Works with Contractor's Design 2013 and Framework Agreement. In addition, revised Sub-Contract Conditions (Sub/C/Scot 2011, Sub/D/C/Scot 2011 and DBSub/C/Scot 2011) have been published, respectively covering the situations where there is no design element in the sub-contract, where the main contractor is to design parts of the main contract works and the sub-contractor is to design all or part of the subcontract works, and for use with the design and build main contract, whether or not the sub-contract works include design by the sub-contractor.

The SBCC published in May 2012 a Named Specialist Update which contained optional provisions for incorporation into the SBC to enable the Employer, by means of an appropriate entry in the Contract Particulars to name individual specialists as domestic sub-contractors for identified parts of the Works.

In 2013, the SBCC published Project Bank Account Documentation for use in Scotland (PBA/Scot 2013) where the parties wish to adopt the use of a project bank account for payment purposes (see Section 8.7).

In the same year it published two versions of a Homeowner Contract – HOB/Scot 2013 for use by a homeowner/occupier who has not appointed a consultant to oversee the work, and HOC/Scot 2013 where a consultant has been appointed. See also Section 1.4.6 in relation to the new forms of Pre-Construction Services Agreement published by the SBCC.

In this book, references to clauses are (unless the text expressly specifies otherwise) to those in the Standard Building Contract With Quantities for use in Scotland, SBC/Q/Scot (2011 Edition). This contract is referred to in this book as 'the SBC'. In view of the predominant role of design and build as a method of procurement, this book also focuses on the relevant provisions of the Design and Build Contract for use in Scotland, DB/Scot (2011 edition), which is referred to for convenience as 'the SBC/DB'. In the sections which consider the relevant provisions of the SBC and the SBC/DB, we use the defined terms set out in those contracts.

1.6 *The NEC3 forms of contract*

The NEC forms of contract were first published in 1993 as the 'New Engineering Contract' followed by a second edition, the NEC2 in 1995, and by the NEC3 in 2005. Updated editions of the NEC3 suite, along with a new Professional Services Short Contract, were published in April 2013. The NEC family of documents has become increasingly popular and in particular is widely used by the public sector throughout



the UK. The NEC3 suite of contracts now comprises the Engineering and Construction Contract; the Engineering and Construction Short Contract; the Engineering and Construction Subcontract; the Engineering and Construction Short Sub-Contract; the Professional Services Contract; the Professional Services Short Contract; the Term Service Contract; the Term Service Short Contract; the Supply Contract; the Supply Short Contract; the Framework Contract; and the Adjudicator's Contract. Of these, this book will focus only on the Engineering and Construction Contract. The term 'the NEC3' will be used in this book (except where otherwise stated) to refer to the NEC3 Engineering and Construction Contract, April 2013 edition.

NEC3 can be used for a wide range of different procurement routes and comprises nine Core clauses, with six Main Option clauses, two Dispute Resolution clauses and 18 Secondary Options clauses. The main options are as follows:

- Option A: Priced Contract with Activity Schedule
- Option B: Priced Contract with Bills of Quantities
- Option C: Target Contract with Activity Schedule
- Option D: Target Contract with Bills of Quantities
- Option E: Cost Reimbursable Contract
- Option F: Management Contract.

The Employer must choose one of these main options.

One of the Dispute Resolution Options W1 or W2 must be chosen, depending on whether or not the 1996 Act applies.

The Employer may then choose some or none of the Secondary Options numbered X1 to X20 (X8–X11 and X19 are not used).

These secondary Options range from those which are commonly used (e.g. X7 (Delay Damages); X13 (Performance Bond)) to the more esoteric (e.g. X3 (Multiple Currencies)), while others will have particular attraction to the Contractor (e.g. X15 (Limitation of the Contractor's liability for his design to reasonable skill and care); X18 (Limitation of liability)).

Option Y(UK)2 should be used where the 1996 Act applies since it incorporates Act-compliant payment provisions. The 2013 edition of the NEC3 reflects the changes to the 1996 Act.

Option Y(UK)3 should be chosen if the intention is to allow a third party to enforce a term of the contract under the Contracts (Rights of Third Parties) Act 2009 (though this would need express amendment for use in Scotland since the common law principle of *jus quaesitum tertio* applies in Scotland and not the 2009 Act).

The most significant changes to the NEC3 Engineering and Construction Contract introduced by the April 2013 edition were Project Bank Account provisions as new Option Y(UK)1 (see also Section 8.7) and also additional references to the CIC Building Information Modelling Protocol (see Section 1.7). There is also an expanded range of guidance booklets.

A striking feature of the NEC3 is its use of the present tense rather than the more familiar imperative mood. Clause 11 also makes a distinction between 'identified' and 'defined' terms. Terms which are identified in the Contract Data are used in italics



1.7 Building Information Modelling (BIM)

27

throughout the contract and these are primarily contract-specific. Terms which are defined in clause 11.2 have initial capitals.

Another feature of the NEC3 is the provision for 'Z clauses' which allow for bespoke additional conditions of contract to be added. Since there is no equivalent NEC3 contract for use in Scotland, it is often necessary to use Z clauses to import changes necessary to reflect Scots law (e.g. third party rights, as mentioned above).

Another feature of the NEC3 is the incorporation into the contract of the Contract Data which sets out project-specific information, provided by the Employer in Part 1 and by the Contractor in Part 2.

A key document is the Works Information which is produced by the Employer and which needs to be drafted with care to ensure that all necessary information is included. For example, there is a single NEC3 form of Engineering and Construction Contract, with no separate design and build version. Clause 21.1 states that 'the Contractor designs the parts of the Works which the Works Information states he is to design'. Thus any design responsibilities to be imposed on the Contractor *must* be set out in the Works Information. This one example highlights the importance of ensuring the completeness of the Works Information.

The NEC has also published a comprehensive set of guidance notes and flow charts for the various forms of contract within the NEC3 suite.

1.7 Building Information Modelling (BIM)

At the time of writing, the potential impact on contractual relationships of Building Information Modelling (BIM) is still not fully known, but there is no doubt that the construction industry is moving towards support for the use of BIM. The UK Government Construction Strategy, published in May 2011, confirmed the commitment to using BIM, with the intention that by 2016 central government projects above a certain level will be executed using BIM Level 2, with the ultimate goal of moving to BIM Level 3. A similar approach was taken in the Scottish Government's 'Review of Scottish Public Sector Procurement in Construction', published in October 2013, which recommended the use of BIM for central Scottish Government projects with the objective that construction projects across the public sector adopt a BIM Level 2 approach by April 2017.

The annual BIM construction industry-wide survey carried out by the NBS in the three months to February 2013 found that, of 1350 professionals participating, 39% were using BIM, compared with a corresponding figure in 2010 of 13%, and that 71% agreed that BIM represented the 'future of project information' (though the fact that 74% agreed that 'the industry is not yet clear enough on what BIM is yet' might suggest that much educational work still needs to be done).

The most commonly used definition of BIM is that given by the Construction Project Information Committee (CPIC): 'a digital representation of physical and functional characteristics of a facility creating a shared knowledge resource for information about it forming a reliable basis for decisions during its life cycle, from earliest conception to demolition'. In broad terms, BIM Level 2 is a process involving



a managed 3D environment achieving integration by proprietary interfaces and 4D program data, while BIM Level 3 involves full integration of data managed by a single collaborative model server. Each member of the design team and also design sub-contractors contribute to the project model.

It is envisaged that a BIM Manager (also referred to in some contracts as the BIM Information Manager) will be appointed with responsibility for management of the model. They may be the lead designer or this may evolve as a separate discipline. Their role will include responsibility for user access to the model and coordinating and integrating the individual designs into the model.

This leads to a number of potential legal issues, such as intellectual property rights in and ownership of the integrated model, insurance, and also the responsibilities and liabilities of each designer who contributes to the model, as well as that of the BIM Manager for such contributions (for example, for not identifying clashes), particularly bearing in mind that there is likely to be a need to use the model for many years after construction completion.

A key document for any project using BIM is the BIM Protocol, which in most cases will be a contract document, for both professional appointments and the building contract, and will set out the roles and responsibilities of the design team in relation to the creation and updating of the model; access rights to the model; and the role of the BIM Manager.

It may well be that concerns as to the uncertainty of legal responsibilities for the model are exaggerated and that it is no more complicated than the designer being responsible for his own discipline-specific contribution in accordance with the usual principles of traditional design. Even so, it is possible that the growth in the use of BIM will see a corresponding increased use in major projects of integrated design teams led by a lead designer with a number of sub-consultants, so as to avoid the employer being exposed to any gaps in responsibility.

The industry standard form contracts have addressed BIM in different ways. JCT published a Public Sector Supplement in September 2011 which they then updated in December 2011. In Scotland, the SBCC published a Public Sector Supplement for use in Scotland, in November 2011. In relation to BIM, the Supplements include amendments to the main JCT and SBC and SBC/DB forms which provide for the inclusion of 'any agreed Building Information Modelling protocol' as a contract document, thus imposing a duty on the Contractor to comply with the protocol. The April 2013 edition of the NEC3 includes references to the CIC Building Information Protocol. The NEC has also published a new Guide: *How to Use BIM with NEC3 Contracts*, which sets out some practical steps on using BIM, dealing with the contractual and technical matters that arise.

These recent amendments made to the JCT/SBCC and the NEC3 forms of contract to address BIM are of a fairly 'high level' nature, marked by the absence of substantial amendments to the contract clauses. The NEC3 Guide on BIM referred to above includes guidance on using the BIM Protocol and provides suggested additional clauses to use with the NEC3, the intention being that these be framed as additional clauses under Option Z, rather than as part of a new stand-alone Secondary Option. These clauses would include additional compensation events, i.e. where a party is



1.8 *Soft Landings*

29

unable to provide its contribution to the model due to events outside its control, and where the Employer is obliged to revoke any sub-licence that may have been provided to use information provided by others. The Guide also emphasizes the importance of including the BIM Protocol in the Works Information.

The BIM Protocol intended for use with the NEC3 is the standard form protocol published in March 2013 by the Construction Industry Council (CIC), which is for UK contracts using Level 2 BIM. At the same time the CIC also published two other BIM-related documents, namely, Best Practice Guide for Professional Indemnity Insurance when using BIM; and Outline Scope of Services for the Role of Information Management. The CIC BIM Protocol sets out the contractual basis for the use of BIM and the relevant obligations of the project team members, including the production of models, and the employer's obligation to appoint a BIM Manager (termed the 'BIM Information Manager'). It is intended that the BIM Protocol be part of each of the relevant contract documents, i.e. the building contract and the professional appointments.

Although, unlike the NEC3, the JCT and SBCC BIM-related amendments contained in the Public Sector Supplement do not provide for a specific form of BIM Protocol, there seems no reason why the CIC BIM Protocol could not be used with that Supplement, and indeed it does appear to be accepted that incorporation into the building contract of a standard form BIM Protocol can avoid the need for substantial amendments to the contract, at least where Level 2 is used, other than to dovetail with the Protocol requirements.

Other recent developments signifying the industry move towards BIM are the publication of the PAS (Publicly Available Standard) 1192-2:2013, which is a specification for information management for the capital/delivery phase of construction projects using BIM (with full upgrade to a British Standard expected before 2015), the imminent publication by BIS of BS 7000-4 (Design Management Systems), a guide to managing design in construction which will align with PAS 1192-2:2013 and will take into account the development of BIM and the release by BSI of PAS 1192-3 'Specification for Information Management for the Operational Phase of Construction Projects Using Building Information Modelling' for public consultation which closed early in December 2013. This is a partner document to PAS 1192-2 focussing on the operational phase of assets. See also Section 1.3.2 in relation to the new RIBA Plan of Work 2013, which specifically takes BIM into account.

1.8 *Soft Landings*

Soft Landings is a concept that seeks to address issues arising subsequent to the handover of a building to its users, and can be seen as part of the move towards more sustainable buildings. In June 2009, an industry task group convened by the Building Services Research and Information Association (BSRIA) produced the Soft Landings Framework for better briefing, design, handover and building performance in-use (BSRIA BG 4/2009).



BSRIA's report, *Introducing Soft Landings* describes Soft Landings as:

Soft Landings means designers and constructors staying involved with buildings beyond practical completion to assist the client during the first month of operation and beyond to help fine-tune and de-bug the systems, and ensure the occupiers understand how to control and best use buildings.

The purpose of Soft Landings is described in the Framework as being 'to smooth the transition into use and to address problems that post-occupancy evaluations show to be widespread'.

Soft Landings subsists throughout the whole life of a construction project from design brief and feasibility through construction and commissioning into the period immediately after handover and finally into the early years of operation of the building. The Framework splits these into stages as follows:

- Stage 1 Inception and briefing
- Stage 2 Design development
- Stage 3 Pre handover
- Stage 4 Aftercare
- Stage 5 Years 1 – 3 extended aftercare.

For each of these stages, the Framework sets out a Checklist and Supporting Notes with details of key matters to be considered.

At the same time, the UK Government identified the need to align design and construction with operational asset management, and for that purpose Government Soft Landings (GSL) was developed. The Government Construction Strategy of May 2011 identified that integration of the design and construction of an asset with the operation phase should lead to improved asset performance, while the Government Soft Landings Policy of September 2012 recommended that the policy should apply to all new central government projects and major refurbishments and should be implemented by central government departments during 2013, working towards a mandate in alignment with BIM in 2016.

The Government Construction Strategy One Year On Report and Action Plan Update of July 2012 reports that ten trial projects have been introduced to test GSL. A draft policy document on GSL to reflect findings from the trial projects will be produced and proposals will then be developed for roll-out of the strategy.

The responsibility for GSL from October 2012 onwards moved to the BIM Task Group in order to ensure that BIM and GSL are in alignment and to allow work towards the combined mandate in 2016.

It is clear that, for Soft Landings to operate as intended, the end users, operators, contractors and designers must all be involved from a very early stage in the project. The BIM Task Group suggests that parties involved engage a GSL Lead or Champion.

Contractual documentation to take into account the needs of Soft Landings is being prepared by the BIM Task Group, recognizing that the post-handover requirements of GSL require an involvement beyond that conventionally provided for within standard



1.8 *Soft Landings*

31

construction contracts and professional appointments and that a contractual arrangement to engage these parties for the post-completion period will be necessary.

The BIM Overlay to the RIBA Outline Plan of Work (see Section 1.3.2) contains various references to Soft Landings-related activities, which indicates some movement already towards inclusion of this within architects' work scopes.

The BSRIA Core Principles suggest a light touch approach to the contractual documentation in respect of Soft Landings with a commitment to use the Soft Landings process as an overall aim. The philosophy is that Soft Landings will work best where parties work together in a collaborative manner, sharing risks and rewards; and there is a concern that if contractual obligations and responsibilities are too tightly specified, gaps can occur.

There is clearly also a close interaction between Soft Landings and BIM, as illustrated by the integration of GSL within the BIM Task Group's remit. Therefore, contractual arrangements for Soft Landings need to be considered along with those required for BIM and a common and integrated approach taken to achieve the aims.