

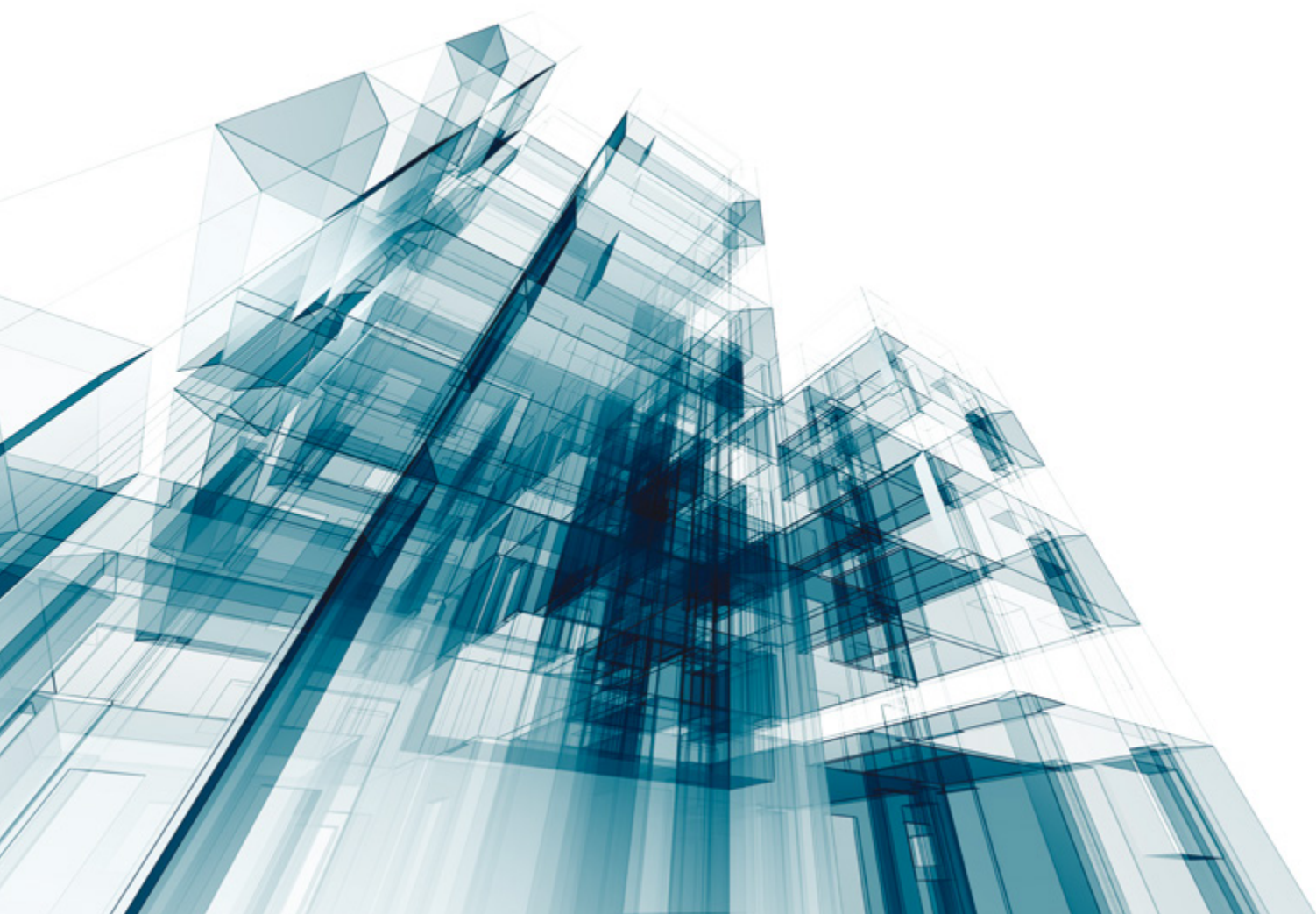
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RICS guidance note, UK

Appropriate contract selection

1st edition



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RICS guidance notes

International standards

RICS is at the forefront of developing international standards, working in coalitions with organisations around the globe, acting in the public interest to raise standards and increase transparency within markets. International Property Measurement Standards (IPMS – ipmsc.org), International Construction Measurement Standards (ICMS), International Ethics Standards (IES) and others will be published and will be mandatory for RICS members. This guidance note links directly to and underpins these standards and RICS members are advised to make themselves aware of the international standards (see www.rics.org) and the overarching principles with which this guidance note complies. Members of RICS are uniquely placed in the market by being trained, qualified and regulated by working to international standards and complying with this guidance.

RICS guidance notes

This is a guidance note. Where recommendations are made for specific professional tasks, these are intended to represent 'best practice', i.e. recommendations which in the opinion of RICS meet a high standard of professional competence.

Although members are not required to follow the recommendations contained in the note, they should take into account the following points.

When an allegation of professional negligence is made against a surveyor, a court or tribunal may take account of the contents of any relevant guidance notes published by RICS in deciding whether or not the member had acted with reasonable competence.

In the opinion of RICS, a member conforming to the practices recommended in this note should have at least a partial defence to an allegation of negligence if they have followed those practices. However, members have the responsibility of deciding when it is inappropriate to follow the guidance.

It is for each member to decide on the appropriate procedure to follow in any professional task. However, where members do not comply with the practice recommended in this note, they should do so only for a good reason. In the event of a legal dispute, a court or tribunal may require them to explain why they decided not to adopt the recommended practice. Also, if members have not followed this guidance, and their actions are questioned in an RICS disciplinary case, they will be asked to explain the actions they did take and this may be taken into account by the Panel.

In addition, guidance notes are relevant to professional competence in that each member should be up to date and should have knowledge of guidance notes within a reasonable time of their coming into effect.

This guidance note is believed to reflect case law and legislation applicable at its date of publication. It is the member's responsibility to establish if any changes in case law or legislation after the publication date have an impact on the guidance or information in this document.

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Document status defined

RICS produces a range of professional guidance and standards products. These have been defined in the table below. This document is a guidance note.

Type of document	Definition	Status
Standard		
International standard	An international high level principle based standard developed in collaboration with other relevant bodies	Mandatory
Practice Statement		
RICS practice statement	Document that provides members with mandatory requirements under Rule 4 of the Rules of Conduct for members	Mandatory
Guidance		
RICS code of practice	Document approved by RICS, and endorsed by another professional body / stakeholder, that provides users with recommendations for accepted good practice as followed by conscientious practitioners	Mandatory or recommended good practice (will be confirmed in the document itself)
RICS guidance note (GN)	Document that provides users with recommendations for accepted good practice as followed by competent and conscientious practitioners	Recommended good practice
RICS information paper (IP)	Practice based information that provides users with the latest information and/or research	Information and/or explanatory commentary

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1 Introduction

This guidance note reviews the various types of construction contract that are available for use in the UK. It also reviews the factors to consider when choosing the most appropriate construction contract for a particular project.

This guidance note focuses on how clients (referred to here as the **employer**) and their professional advisers should select a construction contract to engage a main contractor (referred to here as the **contractor**) to carry out work on private or public sector construction projects. Similar factors may determine how contractors select appropriate sub-contracts to engage their sub-contractors (although this should largely be driven by the type of main contract in use on a particular project), but an analysis of this area is outside the scope of this guidance note.

Guidance is given under the following headings, which conform to the RICS' Assessment of Professional Competence (APC):

- General principles (Level 1 – Knowing)
- Practical application (Level 2 – Doing)
- Practical considerations (Level 3 – Doing/Advising)

The first part of this guidance note provides a summary of the most commonly adopted procurement routes in the UK. This is required because the selection of the procurement route will be a key factor in determining which construction contract is then chosen for a particular project. The opposite should not occur, i.e. a form of construction contract should not be chosen prior to selection of the procurement route. Readers should also be aware that this part of this guidance note is a summary only. RICS guidance note: *Developing a construction procurement strategy and selecting an appropriate route* (GN 109/2013) covers selection of the procurement route in greater detail and should be read in conjunction with this guidance note.

The first part of this guidance note also provides an introduction to the various bodies that publish forms of construction contract for use in the UK and an explanation of the various forms of construction contract that are available.

The second part of this guidance note provides an in-depth analysis of the different types of construction contract that can be selected for the most commonly adopted procurement routes in the UK. It also provides a consideration of other factors that should influence appropriate contract selection. The Appendix provides a further comparison of four of the most commonly used construction contracts in the UK.

The third part of this guidance note considers various practical issues relating to contract creation, formation and amendment.

All parties in the construction process should realise that the choice of construction contract will not, on its own, determine whether a particular project is completed on time, to budget and with minimal defects. Many factors will determine whether a project is a success or not (e.g. the choice of procurement route, the tendering strategy, the balance of risk in the contract, the skills of the contractor and its supply chain, good programming and planning, and the goals, attitude and approach of the parties). The interrelationship of all these factors will determine the outcome.

Readers should be aware that this guidance note does not cover the needs of the consumer/domestic market, where individual owner/occupiers are contracting with small building firms for home improvements, extensions or repairs for a lump sum. Consumers enjoy additional protection through various pieces of consumer legislation and certain key pieces of legislation (e.g. the *Housing Grants, Construction and Regeneration Act 1996* (as amended)) do not apply to residential occupiers. Therefore, the focus of this guidance is on the commercial construction and engineering markets in the UK.

Finally, this guidance note does not cover other contracts that employers may require on their construction projects, such as the appointment of their professional team (e.g. an architect, structural engineer or quantity surveyor).

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2 General principles (Level 1 – Knowing)

2.1 Introduction

This section covers the primary information required to satisfy the 'knowing' requirements of the Level 1 competency of the APC, and includes:

- a summary of the most commonly adopted procurement routes in the UK
- the use of standard form construction contracts; and
- an introduction to the various bodies that publish forms of construction contract for use in the UK and the different forms of construction contract that they produce.

2.2 Procurement routes

This section provides a summary of the most commonly adopted procurement routes in the UK. Greater detail on the different procurement routes (including the advantages and disadvantages of each) is provided in GN 109/2013 (see Section 1) and should be referred to in conjunction with this guidance note.

It is recommended that all factors influencing a project are identified and the project requirements analysed before selecting the appropriate procurement route. The appropriate procurement route for the design and construction of the project can then be developed. Some procurement routes involve the separate appointment of the design and construction teams and provide little opportunity for integration or collaboration (e.g. during the design process). Other procurement routes enable the design and production processes to be closely integrated.

There could be more than one procurement route that could be adopted to achieve the aims of the employer and requirements of the project. It is advisable to consider each option carefully, as each will address the various influencing factors to a different extent.

The most commonly adopted procurement routes for construction projects in the UK are as follows:

2.2.1 Traditional (lump sum)

This procurement route is typically characterised by a separation of responsibility for the design and the production/construction of the project.

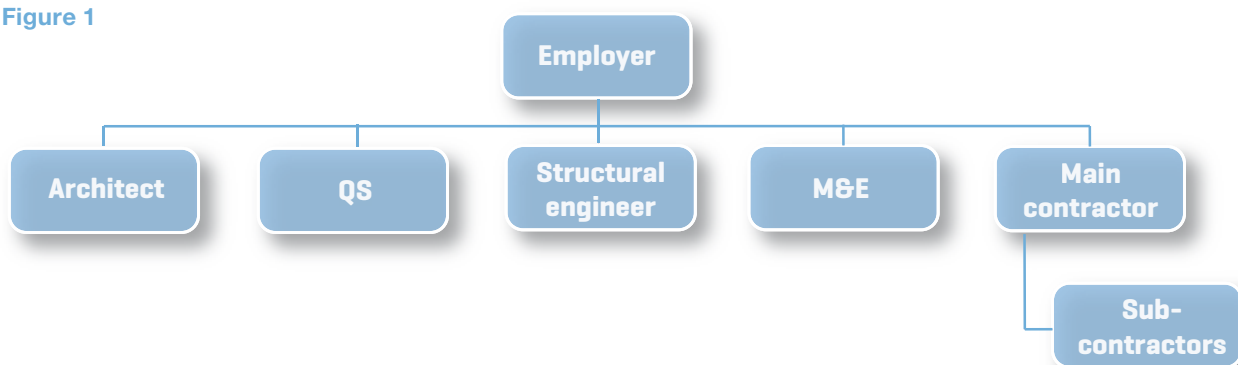
The typical contractual structure for a project procured on a traditional basis is as Figure 1.

The employer appoints the contractor via the construction contract and also separately appoints the team of professional consultants (e.g. the architect, structural engineer, building services engineer and quantity surveyor). The contractor assumes the responsibility and financial risk for constructing the project in accordance with the design produced by the employer's team of professional consultants, for the agreed contract sum and within the agreed contract period. The employer bears the responsibility and risk for the design and performance of the team of professional consultants. An architect, project manager or contract administrator will administer the construction contract on behalf of the employer. The architect will also generally take the lead in coordinating the design produced by all the other design consultants. However, in civil engineering projects, the lead designer will generally be a civil engineer who will coordinate the design provided by other specialist engineers.

Projects procured on a traditional basis typically have a contract sum that is developed on a 'fixed price lump-sum' basis. The fixed price lump-sum is what the employer will pay to the contractor for carrying out the works described in the construction contract. However, most construction contracts permit the contract sum to be altered in certain circumstances, for example:

- if the employer requests changes to the project during its construction

Figure 1



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- if certain events occur during the construction of the project that are specifically stated in the construction contract to entitle the contractor to more money, e.g. if the employer himself causes a delay to the project by failing to procure the requisite access to the site for the contractor; or
- by the inclusion of 'fluctuations' clauses, which allow the contractor to claim increased costs of materials and/or labour.

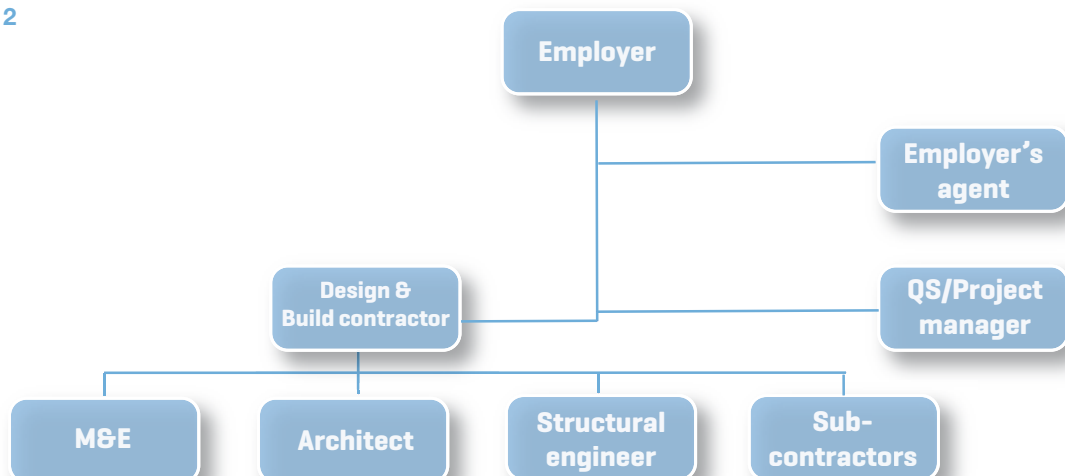
Therefore, although a traditional contract may be procured on a fixed price lump-sum basis, the final contract sum that is paid to the contractor may be higher or lower than the original contract sum stated in the construction contract.

In addition, although it was noted above that projects procured on a traditional basis typically involve the separation of responsibility for design and construction, there are certain circumstances in which an employer may ask the contractor to design a discrete element or elements of a project (e.g. the cladding system or certain mechanical and electrical works and interfaces). This is often known as a Contractor's Designed Portion or CDP. A construction contract with a CDP element will still generally be described as a traditional contract, rather than a 'design and build contract' (under which the contractor is typically responsible for the design and construction of the whole of the project). Design and build contracts are discussed in further detail in Section 2.2.3.

However, in contrast to a pure traditional contract, where a construction contract contains a CDP element, the contractor takes on additional obligations that specifically relate to the design element. These include:

- an obligation to take out and maintain professional indemnity insurance
- the grant of a copyright licence to the employer (to enable the employer to use the copyright material contained with the contractor's design for the CDP); and
- a warranty to the employer that the contractor will use an appropriate level of skill, care and diligence in carrying out the design for the CDP.

Figure 2



2.2.2 Traditional ['re-measurement' or 'measure and value']

Most contracts that are procured on a traditional basis are paid for by way of a fixed price lump-sum. However, occasionally, traditional contracts are paid for on a 're-measurement' or 'measure and value' basis (e.g. in civil engineering projects where there is uncertainty regarding the amount of work to be done).

The organisational structure of a measurement contract is identical to the traditional fixed price lump-sum approach (as shown in the diagram in Section 2.2.1). The only difference is the basis on which payment is made.

With a re-measurement contract, the contract sum is only established with certainty upon completion of construction, when re-measurement of the quantities of work actually carried out takes place. It is then valued on an agreed basis.

Therefore, a re-measurement contract is based upon the principle that the work carried out is measured and valued at rates for each type of work tendered by the contractor. There is no 'contract sum' as such. Instead the bill of quantities effectively constitutes a schedule of rates for each unit or item.

2.2.3 Design and build

While a traditionally procured construction contract is characterised by the separation of responsibility for the design and the production/construction of a project, a construction contract that is procured on a design and build (D&B) basis is characterised by the contractor taking responsibility for both the design and the production/construction of a project. One of the main reasons employers often choose this form of procurement route is the desire to have one party (the contractor) as the single point of responsibility for the design and production/construction of a project. However, the extent of the creation of a true single point of responsibility will depend on the terms and conditions of the construction contract with the contractor.

The typical contractual structure for a project procured on a D&B basis is as Figure 2.

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The employer appoints the contractor under a single construction contract, typically on a fixed price lump-sum basis, to carry out the dual role of design and construction. It is then the contractor's responsibility to appoint its own professional design team (e.g. the architect, structural engineer and building services engineer) and sub-contractors in order to fulfil those responsibilities. The contractor will bear the risk of completing the design and construction of the project in accordance with the agreed contract sum and contract period.

D&B contracting encompasses a range of approaches that involve the contractor taking on responsibility for the design and construction of a project. For example, sometimes the contractor will be left to interpret the requirements of the employer and provide a building as a completed package. On other occasions, an employer may himself initially employ the design team to work up the initial concept design and develop the employer's requirements (in response to which the contractor submits the contractor's proposals) before that design team is transferred (by way of novation agreements) to the contractor. This enables the contractor to complete the design for the project using a design team that has already been involved in the project. The contractor will assume responsibility for the design of the project as well as the construction of it.

2.2.4 Construction management

Under a construction management (CM) route, the employer does not allocate risk and responsibility to a single main contractor. Instead, the employer employs the design team (e.g. the architect, structural engineer and building services engineer) and a separate construction manager is engaged as a fee-earning professional to manage, programme and co-ordinate the design and construction activities and to facilitate collaboration.

The typical contractual structure for a project procured on a CM basis is as Figure 3.

Therefore, as can be seen in the diagram, the employer appoints a construction manager and a team of professional consultants. The construction manager will manage the construction of the project. The professional consultants carry out the design of the project, although the construction manager may manage (but will not usually carry out) elements of specialist design.

The construction manager arranges for the employer to appoint specialist trade contractors (e.g. for foundations, concrete, electrical installation or decorating). The employer enters into the trade contracts with the trade contractors. The construction manager administers the trade contracts, but does not enter into contract directly with the trade contractors. In this way, the construction manager is liable to the employer for the proper performance of its construction management services, but the construction manager is not responsible, per se, for the design or construction of the project by the professional consultants and trade contractors.

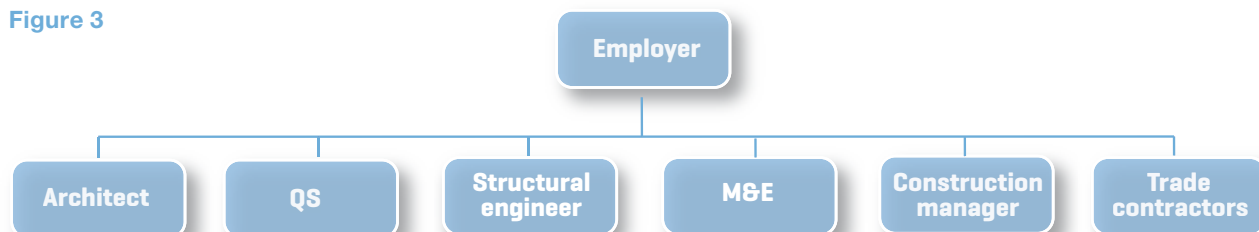
With the CM route, design and construction can overlap. Because this speeds up the overall project programme, CM is known as a 'fast track' route. However, although the time for completion may be reduced, price certainty is not achieved until design and construction have advanced to the point where all of the construction (trade) packages have been let.

Employers should also be wary of choosing the CM route if they have little experience of construction matters. In adopting the CM route, the employer will generally be closely involved in each stage of design and construction. The employer should have a body of staff with sufficient time and expertise to assess the recommendations of the construction manager and take the necessary action (e.g. effective decision making and dealing with the administrative role of payments to the professional consultants and trade contractors). Therefore, the CM route is not usually a good option for an inexperienced employer or one without sufficient internal resources.

2.2.5 Management contracting

Under a management contract, the employer engages a management contractor to participate in the project at an early stage, contribute construction expertise to the design, and manage the construction of the project. The management contractor does not carry out any construction work, but manages the project for a fee, which is paid on top of the construction costs incurred by the management contractor. The management contractor then employs and pays works contractors to carry out the actual construction works.

Figure 3



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In effect, management contracting consists of 100% sub-contracting. Every item of the construction works is sub-contracted to the works contractors. It is this sub-contracting feature that distinguishes management contracting from construction management (discussed in Section 2.2.4), under which the separate trade contracts are all entered into directly between the employer and trade contractors.

The design of the project is generally carried out by the professional consultants engaged directly by the employer, although certain discrete parts of the design may be carried out by the works contractors.

The typical contractual structure for a project procured on a management contracting basis is as Figure 4.

As can be seen from the diagram, management contracting has many similarities with traditional contracting. However, because of the complete sub-contracting of all construction works, the management contractor's role is more on a level with the other professional consultants as he administers the construction works being carried out by the works contractors. The employer looks to the management contractor to see that the construction work is properly carried out, but the management contractor is usually only liable to the employer for:

- the management contractor's own negligence or breach of the management contract; and
- breaches of the works contracts, but only to the extent that the management contractor recovers damages from the works contractors.

In addition, even though the management contractor appoints the works contractors, the employer usually also enters into a separate direct agreement with each works contractor. Under these agreements, the works contractors warrant to the employer that they will carry out their works properly. In some respects, these agreements are similar to collateral warranties.

As mentioned previously, unlike traditional or D&B contracting, a management contract is not a fixed price lump-sum contract. The amount to be paid to the management contractor is the prime cost of all work done under the management contract, plus the management contractor's fee. Therefore, while the management contractor is under an obligation to control costs, the employer has to pay whatever the management contractor spends, plus an amount for the management fee (which may either be a lump sum or a percentage of the prime cost). Because of these arrangements, the contract between the employer and the management contractor can be considered a 'cost reimbursement' or 'prime cost' contract.

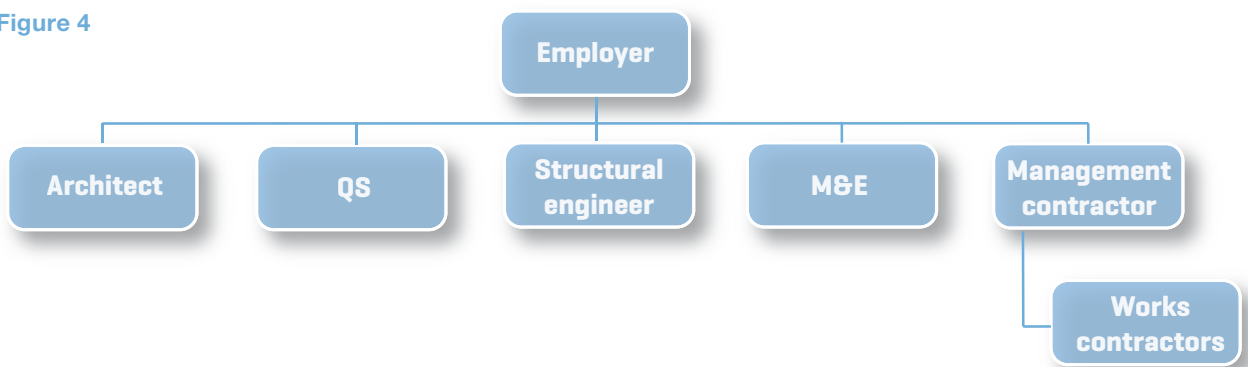
2.2.6 Partnering

Partnering is not, of itself, a procurement route. Instead, it is a concept that can be applied to many procurement routes. Partnering denotes a cooperative relationship between business partners formed in order to improve performance in the delivery of projects. It is a set of collaborative processes, attitudes and behaviours which emphasise the importance of common goals and the desire to move away from confrontational attitudes or behaviour intended to take inappropriate commercial or legal advantage of the other party.

The precise meaning of partnering varies between parties, projects and contracts, but it can be applied on a project-specific basis or as part of a longer term, multi-project, relationship.

Under project partnering, the employer, the contractor(s) and professional consultants agree to work collaboratively on a single project. The parties may use a partnering contract or a non-binding 'partnering charter'. They may use a contract such as from the NEC3 suite of contracts that has a partnering ethos, even if not formally labelled as a partnering contract (unless secondary Option X12 is chosen). Alternatively, they could use a contract such as the PPC2000 that has been drafted specifically for use as a partnering contract.

Figure 4



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In contrast, strategic partnering takes place over time, usually across the course of a number of projects. An employer will work with a group of contractors and professional consultants, sometimes without a guarantee of specific work, to meet mutually agreed targets. The targets are formalised in a binding (or non-binding) partnering agreement. The prospect of a medium/long term flow of work incentivises all parties to work together in a collaborative manner, designed to benefit all parties and the projects they are working on, rather than each party acting solely for its own benefit.

2.2.7 Public Private Partnerships (PPP)

The term Public Private Partnership (or PPP) is an umbrella term that covers a diverse range of business structures and partnerships involving the public and private sectors. Typically, private sector companies will enter into some kind of partnership with the public sector for supporting or providing a public service.

The best known of the PPP arrangements is the Private Finance Initiative (PFI), which has now been revamped for England and Wales and is known as Private Finance 2 (or PF2). Other PPPs involve joint ventures and concessions, outsourcing and the sale of equity stakes in state-owned businesses. Examples include education, housing, waste, street lighting and hospital PFI schemes; the Priority Schools Building Programme, the Severn River crossings and Dartford toll bridge and tunnel.

One key aspect of PPP schemes is that the public sector seeks to transfer much of the development and financing risk on to the private sector. For example, a PFI project involves a long term contractual arrangement (often 25–30 years) between the public and private sector. The private sector agrees to finance, design, build and operate a particular asset (e.g. a hospital, school, road or prison) that the public sector is able to use. The private sector is also obliged to provide long term lifecycle investment and routine maintenance; sometimes together with 'soft services' (e.g. catering, cleaning, rent collection).

In return, once the particular asset is built, the public sector pays a regular service charge to the private sector consortium for the duration of the contractual term for the operation of the particular asset. Payment of that service charge is reduced in the event of poor service delivery or performance by the private sector. At the end of the contractual term, the asset is then returned to the public sector. Other PPP schemes have more diverse approaches, which might not involve transferring the ownership of the asset at the end of the contractual term.

The contractual structure for a PF2 project is as Figure 5.

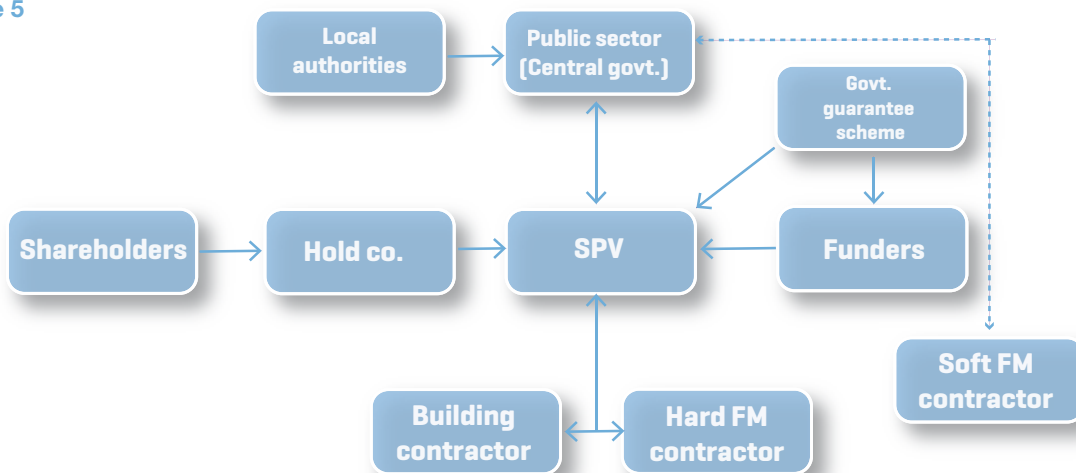
As can be seen from the diagram, a PF2 scheme involves a complex web of contractual relationships. A PF2 project is typically delivered through the creation by the private sector of a consortium (known as a Special Purpose Vehicle or SPV). The SPV will be financed by its parent companies and also by loans from banks. The SPV will enter into the concession agreement with the public sector and will also enter into agreements with those contractors who will be carrying out the actual construction and maintenance services. Only once the asset is constructed will the public sector start paying the service charge to the SPV, although the construction contractor is paid for his works by the SPV throughout the construction period.

The position in Scotland is slightly different. PPP-type schemes are procured in Scotland through the Non-Profit Distributing (NPD) model or the 'hub' model. The NPD model is used for larger scale assets such as roads, acute healthcare and larger further education projects, whereas the hub model is used for smaller scale community services projects such as primary care centres and schools.

Both of these models share many characteristics with PF2 and the aspects described above. The defining characteristics of NPD/hub models include:

- Non-dividend bearing equity: shares in the NPD SPV do not pay dividends, with investors earning their return through the loans that they provide to the SPV.

Figure 5



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- Capped returns: on both hub and NPD schemes the SPV is required to share 'excess' profits with the procuring authority.
- Increased public sector involvement/transparency over SPV: on NPD projects a public interest director is appointed to the board of the SPV and is able to exercise certain controls over the SPV. On hub schemes, two of the five SPV directors will be from the public sector.
- No soft services: both the hub and NPD projects limit the maintenance service to 'hard' facilities management only.

2.2.8 Others

In addition to the main procurement routes already described, there are other forms of procurement used in the UK that are often offshoots or variants of the main procurement routes. These include, but are not limited to, the following:

- **Cost plus/cost reimbursable/prime cost:** This form of contracting is known by a number of different names, but the key feature is how the contractor is paid under the construction contract. Under a cost plus/cost reimbursable/prime cost contract, the contractor is paid the 'prime cost', i.e. the contractor is reimbursed the full cost it reasonably incurs in discharging its contractual obligations. In addition, the contractor is entitled to recover a fixed fee (usually expressed as a certain percentage of the prime cost) to cover its overheads and profit. As such, it is a low risk procurement route for the contractor with very limited cost control for the employer. However, apart from this payment structure, the contractor's other obligations under this form of contract are very similar to those found in a traditional or design and build contract.
- **Target cost:** Target cost contracts are a further variant to cost reimbursable contracting. Under a target cost contract, the employer and contractor agree a target price for carrying out the works and the basis for adjusting the target price. They also agree their respective shares of any savings made if the cost of carrying out the works is less than the target price, or any additional cost incurred if the target price is exceeded. This provides a means by which financial 'pain' and 'gain' are shared between the employer and the contractor. Therefore, target cost contracts are often said to contain a 'painshare/ gainshare' mechanism. This mechanism should actively encourage both parties to work together to manage the cost of the works. As with cost reimbursable contracts, apart from the payment structure of target cost contracting, the contractor's other obligations under this form of contract are very similar to those found in a traditional or design and build contract.
- **Term contracts:** Term contracts enable employers and contractors to enter into long term arrangements where there is likely to be a regular flow of work for the contractor. Term contracts are particularly useful where an employer requires a contractor to carry out regular maintenance or some other kind of minor works to an existing asset for a specific period. The term contract will contain a mechanism that enables the employer to issue instructions (often known as 'call-off orders') to the contractor which will detail the exact nature of the works required. Term contracts are a form of measurement contract, so the contractor's work is measured and valued after completion on the basis of an agreed schedule of rates.
- **Framework agreements:** As with term contracts, framework agreements enable employers and contractors to enter into long term arrangements where there is likely to be a regular flow of work for the contractor. However, in contrast to term contracts, framework agreements are often used to procure the construction of a new asset, as opposed to term contracts which generally cover the maintenance of an existing asset. Instructions to carry out works are also issued by way of a call-off order to the contractor but, depending on how the framework agreement is drafted the call-off order may itself constitute a separate contract that is distinct from the overarching framework agreement.
- **Alliancing:** This form of procurement wraps together some of the key concepts of partnering and target cost contracting to produce a highly sophisticated form of contract that has so far mainly been used by large employers on major projects in the utilities, rail, and oil and gas sectors. An alliancing contract is typically a multi-party contract under which an alliance (comprising the various contractors and the employer as 'owner/participant') contracts with the employer to deliver a particular project. Alliancing necessitates a radically different mindset (from all parties) when compared with other forms of contracting. For example, an alliancing charter will be a key document in the contract and core themes include 'everybody wins or everybody loses', decisions on a 'best for project' basis, participants having an equal say, payment is on a target cost painshare/gainshare basis, and there is a 'no claim/no blame' culture allied with only minimal grounds for parties to bring formal proceedings against each other.
- **EPC contracts:** Engineering, procurement and construction (EPC) contracts are a common form of contract used by the private sector on large scale or complex construction and engineering projects. For example, EPC contracts may be used in the energy sector to procure a new power station or offshore wind farm. EPC contracts are aimed at delivering engineering, procurement and construction projects that have single point responsibility (for engineering design, procurement and construction), a fixed programme with a set date for delivery, a fixed price, and guaranteed performance and reliability levels. As such, they can be considered as a variant of design and build contracting.

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2.3 The use of standard form construction contracts

When setting up a project based on one of the procurement routes previously detailed, it is common practice for the construction contract between the employer and the contractor to be based on a 'standard form construction contract'. These are construction contracts that are typically drafted by construction industry bodies or trade associations, with the intention of providing a set of standardised terms and conditions for employers and contractors to contract upon.

Using standard form construction contracts should save parties (particularly the employer) time and money because they are not drafting and negotiating bespoke contracts for each new project. Indeed, standard form construction contracts can be used in an unamended manner, i.e. without alteration to the standard terms and conditions, although the Contract Particulars would need to be completed and the relevant contract documents appended to the contract. However, in practice, standard form construction contracts are frequently amended by employers (e.g. by deleting certain clauses and adding new clauses that are designed for any specific requirements an employer may have), particularly on larger projects. The employer and contractor then have to spend time (and possibly money) reviewing, negotiating and agreeing the amendments to the standard terms and conditions. Amending standard form construction contracts is discussed in further detail in Section 4.

Many of the standard form construction contracts are sector specific or have been adopted for use by a particular sector of the construction industry. For example, certain standard form construction contracts are more designed for general commercial construction (e.g. constructing an office block or school, or a major refurbishment of a hotel), whereas others are designed for use in the civil engineering or process engineering sectors. These different types of standard form construction contract have evolved because of the complexities and risks involved in the different construction and engineering sectors and the great difficulty, and probable impossibility, of trying to create a single standard form construction contract that could apply to the whole construction industry. Other standard form construction contracts are drafted by particular industry bodies or trade associations, and the risk allocation in those contracts may therefore be more favourable to the members of that particular industry body or trade association.

One of the other benefits of using a standard form construction contract is to create a known set of terms and conditions that the construction industry (or a particular sector of it) can become familiar with over time. By using the same types of contract on similar projects, parties can come to understand the risk allocation within those contracts and respond accordingly (e.g. a contractor deciding on whether or not to factor a particular risk into its tendered price for carrying out the works).

However, it is common for the parties in large projects to amend standard form construction contracts and this invariably alters the risk allocation in those contracts. Parties need to be aware of these alterations in risk allocation so that they can react accordingly (e.g. by taking out appropriate insurance, by pricing for a particular risk, or by setting up any required administrative procedures). Problems often occur on contracts when the risk allocation has been altered and this has either not been understood by one of the parties or has been understood but not reacted to, and the relevant party has not taken appropriate steps to mitigate the risk.

Finally, those parties who are involved in deciding upon an appropriate procurement route and contract selection should understand that the standard form construction contracts deal with risk and the allocation of risk in different ways. They do not approach the same risks (e.g. adverse site conditions) in the same way. Most standard form construction contracts seek to allocate risk to the party that is most able to manage that risk, but because this will differ on a sector-specific basis, each standard form construction contract approaches the apportionment of risk in different ways.

Therefore, although a particular risk (e.g. adverse site conditions) may be treated in a certain way in one standard form construction contract that does not necessarily mean that it will be treated in the same way in all other standard form construction contracts. This means that those parties involved in choosing the contract for a particular project must understand the risk allocation within the various standard form construction contracts. This will then help inform which contract is the best starting point for the particular project they are working on. The Appendix to this guidance note contains a summary of how certain key risks on construction projects are dealt with in four of the most commonly used construction contracts.

2.4 Publishing bodies and the different forms of construction contract

There are many different standard form construction contracts available for use in the UK market. These are typically published by construction industry bodies or trade associations. Some of these publishers produce standard form construction contracts for many of the procurement routes detailed previously, whereas other publishers (generally the trade associations) only concentrate on certain procurement routes or the production of a standard form construction contract for a certain sector of the construction industry (e.g. demolition).

Therefore, this section provides an introduction to those publishers of standard form construction contracts that are used in the UK market and the contracts that they produce. Note that this is not a summary of all publishers and contracts, but a summary of the main publishers and their construction contracts in the UK market.

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A number of the standard form publishers have recently published revised editions of their contracts. This was largely caused by amendments being made to the *Housing Grants, Construction and Regeneration Act 1996* by the *Local Democracy, Economic Development and Construction Act 2009*. The amendments came into effect on 1 October 2011 (England and Wales) and 1 November 2011 (Scotland). Equivalent changes in legislation were also made in Northern Ireland when the *Construction Contracts (Amendment) Act (Northern Ireland) 2011* came into force on 14 November 2012.

2.4.1 The Joint Contracts Tribunal (JCT)

The JCT is an affiliation of interest groups within the construction industry. It operates as a forum for discussing and determining the content of the standard form construction contracts that it produces.

Since 1931, the JCT has produced standard forms of construction contract, guidance notes and other standard forms of documentation for use by the construction industry. The JCT's 'Memorandum of Association' states that its mission is:

'To develop, publish, procure the publication, revise and disseminate in both paper and electronic form suites of standard forms of contract and tender documentation and practice notes'

The JCT became a limited company in 1998 and the organisation is comprised of seven member bodies. The members of the company represent those sectors of the construction industry who are the key participants in a construction project.

The current membership of the JCT is as follows:

- the British Property Federation
- the Local Government Association
- the Royal Institute of British Architects
- the Royal Institution of Chartered Surveyors
- the Contractors Legal Group Limited
- the National Specialist Contractors' Council Limited; and
- the Scottish Building Contract Committee Limited.

In addition, the JCT also currently has five 'colleges': (i) employers, clients and local authorities, (ii) consultants, (iii) contractors, (iv) specialists and sub-contractors, and (v) the Scottish building industry. It is through these colleges that new forms of contract and amendments to existing contracts are produced. The JCT has a consensus based approach, which means that the views and interests of all these groups are taken into account when producing and amending contracts.

Today, the JCT produces a large and diverse range of standard form construction contracts for use in the UK. The JCT's websites (www.jctcontracts.com and www.jctltd.co.uk) also provide comprehensive information on the documents that the JCT publishes.

The JCT publishes a wide range of contract documentation which includes main contracts, sub-contracts, consultancy appointments, collateral warranties, an adjudication agreement, pre-construction services agreements and documents for use by homeowners. The JCT contracts are aimed at the mainstream commercial construction market in the UK, rather than other sectors such as civil or process engineering.

At the time of writing this guidance note, the latest suites of JCT contracts were published in September 2011. These suites were produced in order to bring the JCT's contracts into line with the amendments that were made to the *Housing Grants, Construction and Regeneration Act 1996*. In addition to those changes that were necessary to comply with the amended legislation, the JCT also took the opportunity to update and tidy up some other parts of the contracts, e.g. the list of adjudicator nominating bodies, the insurance provisions and the list of insolvency events that could lead to termination.

The JCT contracts discussed below are those in use in England and Wales. The Scottish Building Contract Committee Limited (SBCC) (www.sbcconline.com) produces equivalent contracts for use in Scotland but they are very similar to the versions for England and Wales. In Northern Ireland, the Royal Society of Ulster Architects (www.rsua.org.uk) publishes 'Adaptation Schedules' to the JCT's Standard Building Contract, Design and Build Contract, Intermediate Building Contract, Minor Works Building Contract and Measured Term Contract that adapt those contracts to reflect the law in Northern Ireland.

The contractual suites produced by the JCT in 2011 were as follows:

The Standard Building Contract

The JCT's Standard Building Contract (SBC) is often regarded as an 'industry standard' against which all others are measured. The JCT currently produces three versions of the Standard Building Contract:

- the Standard Building Contract with Quantities (SBC/Q)
- the Standard Building Contract without Quantities (SBC/XQ); and
- the Standard Building Contract with Approximate Quantities (SBC/AQ).

The Standard Building Contract is designed for use when the traditional procurement route has been chosen. The 'with Quantities' and 'without Quantities' versions are both fixed price lump-sum contracts with monthly interim payments to the contractor. The only difference between the two being whether bills of quantities are used to define the quantity and quality of work.

The 'with Approximate Quantities' version is a re-measurement contract, as an approximate bill of quantities is used to define the quantity and quality of work which is then re-measured. The price and payment structure of the contract is based on a tender figure which is converted to a final sum on re-measurement and valuation of all work. Interim payments are monthly.

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The Standard Building Contract can be used by private or public sector employers and is intended for larger projects where detailed contract provisions are necessary. Because this contract is used for traditional procurement, the design of the works is carried out by or on behalf of the employer (usually by an architect). However, the contract also provides an option that enables the employer to require the contractor to design discrete parts of the works (a Contractor's Designed Portion).

An architect/contract administrator and quantity surveyor are used to administer the performance of the contractual obligations. Provisions are also included for collaborative working, sustainability, advance payment, bonds (advance payment, off-site materials, and retention), third party rights and collateral warranties.

In addition to the three main Standard Building Contracts, the JCT also publish a number of sub-contracts for use with the Standard Building Contract and two guides:

- Standard Building Sub-Contract Agreement (SBCSub/A)
- Standard Building Sub-Contract Conditions (SBCSub/C)
- Standard Building Sub-Contract with Sub-Contractor's Design Agreement (SBCSub/D/A)
- Standard Building Sub-Contract with Sub-Contractor's Design Conditions (SBCSub/D/C)
- Standard Building Contract Guide (SBC/G); and
- Standard Building Sub-Contract Guide (SBCSub/G).

The Intermediate Building Contract

The JCT's Intermediate Building Contract (IC) is designed for use when the traditional procurement route has been chosen. The contract was developed to help fill the gap between the detailed and lengthy provisions of the Standard Building Contract and the relative simplicity of the Minor Works Building Contract (which is discussed opposite). As such, it is designed to be a very versatile form of contract.

The Intermediate Building Contract is a fixed price lump-sum contract with interim monthly payments to the contractor. The employer must provide drawings and either a bill of quantities, specification, or work schedule to specify the quantity and quality of work.

Because this contract is used for traditional procurement, the employer is responsible for the design. This is usually supplied to the contractor by the architect or design team working on the employer's behalf.

If the appointed contractor is to be responsible for designing specific parts of the works, the normal JCT Intermediate Building Contract should not be used. Instead, the JCT publishes an Intermediate Building Contract with Contractor's Design (ICD) for this purpose. When using the Intermediate Building Contract with Contractor's Design, the employer must also detail the requirements for the parts of the works that the contractor is responsible for designing.

If the employer requires the contractor to have full responsibility for both the design and construction of the project, the Intermediate Building Contracts are not appropriate. Instead, the employer should consider using a full design and build contract.

The Intermediate Building Contracts can be used by both private and public sector employers. An architect/contract administrator and quantity surveyor are used to administer the performance of the contractual obligations. Provisions are also included for collaborative working, sustainability, advance payment, bonds (advance payment, off-site materials, and retention), third party rights and collateral warranties. The contract can be used where provisions are required to cover named specialists. All sub-contractors are domestic and their performance is the responsibility of the contractor.

In addition to the two versions of the Intermediate Building Contract, the JCT also publish a number of sub-contracts for use with the Intermediate Building Contracts, contract conditions where named sub-contractors are used and two guides:

- Intermediate Sub-Contract Agreement (ICSub/A)
- Intermediate Sub-Contract Conditions (ICSub/C)
- Intermediate Sub-Contract with Sub-Contractor's Design Agreement (ICSub/D/A)
- Intermediate Sub-Contract with Sub-Contractor's Design Conditions (ICSub/D/C)
- Intermediate Named Sub-Contract Tender and Agreement (ICSub/NAM)
- Intermediate Named Sub-Contract Conditions (ICSub/NAM/C)
- Intermediate Named Sub-Contractor/Employer Agreement (ICSub/NAM/E)
- Intermediate Building Contract Guide (IC/G); and
- Intermediate Sub-Contract Guide (ICSub/G).

The Minor Works Building Contract

The JCT's Minor Works Building Contract (MW) is designed for use when the traditional procurement route has been chosen. It is designed for use on smaller, lower value, more basic construction projects where the work involved is simple in character.

If the project is of a large value or complex nature then the Intermediate Building Contract or Standard Building Contract may be more appropriate. As such, the Minor Works Building Contract is not suitable where the project is complex enough to require bills of quantities, detailed control procedures, or provisions to govern work carried out by named specialists.

The Minor Works Building Contract is a fixed price lump-sum contract with interim monthly payments to the contractor. The employer must provide drawings, a specification, or work schedules to define the quantity and quality of work.

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Because this contract is used for traditional procurement, the employer is responsible for the design. This is usually supplied to the contractor by the architect or design team working on the employer's behalf.

If the appointed contractor is to be responsible for designing specific parts of the works, the normal JCT Minor Works Building Contract should not be used. Instead, the JCT also publishes a Minor Works Building Contract with Contractor's Design (MWD) for this purpose. When using the Minor Works Building Contract with Contractor's Design, the employer must also detail the requirements for the parts of the works that the contractor is responsible for designing.

If the employer requires the contractor to have full responsibility for both the design and construction of the project, the Minor Works Building Contracts are not appropriate. Instead, the employer should consider using a full design and build contract.

The Minor Works Building Contracts can be used by both private and public sector employers. An architect or contract administrator is used to administer the performance of the contractual obligations. Provisions are also included for collaborative working and sustainability.

In addition to the two versions of the Minor Works Building Contract, the JCT also publishes a Minor Works Sub-Contract with Sub-Contractor's Design (MWSUB/D). This form of sub-contract is for use where the main contract is the Minor Works Building Contract with Contractor's Design (MWD) and the sub-contractor is to design all or part of the sub-contract works. If a sub-contractor does not have any design responsibility then the JCT recommends using its Short Sub-Contract (ShortSub).

The JCT does not currently produce any separate guidance notes for use with its Minor Works Building Contracts or Sub-Contract. Instead, a short section of guidance notes is included at the back of the Minor Works Building Contract, the Minor Works Building Contract with Contractor's Design, and the Minor Works Sub-Contract with Sub-Contractor's Design.

The Design and Build Contract

As the name suggests, the JCT's Design and Build Contract (DB) is designed for use where the design and build procurement route has been chosen. As such, the contract is for use where the contractor carries out the construction of the works and also completes the design of the works. Design and build projects can vary in scale, but the Design and Build Contract is generally suitable where detailed provisions are needed. Therefore, the Design and Build Contract can be considered as the equivalent of the JCT's Standard Building Contract, but is for use with the design and build procurement route rather than the traditional procurement route.

One of the key documents forming the Design and Build Contract is the Employer's Requirements. This details what the employer requires from the completed project and, among other things, will detail the required level of design responsibility from the contractor.

The scale of design work to be carried out by the contractor can vary. The contractor may be required only to complete the design based on a concept provided by the employer or the contractor may be required to carry out virtually the whole of the design for the project. This could be done either via the contractor's own in-house design team or through engaging a specialist design team. The parties may agree that any design team initially engaged by the employer should be transferred (by way of novation) from the employer to the contractor. If this is required, the Design and Build Contract will require amendment to achieve this, as the standard form does not contain novation provisions. The contractor can then use that design team to complete the design for the project. The contractor will also take responsibility for those services that the novated design team carried out prior to the novation, as well as their services after the novation.

The JCT recommends that, where the contractor is only required to design small discrete parts of the works and is not made responsible for completing the design for the whole works, consideration should be given to using one of the other JCT contracts that provide for such limited design input by the contractor and the employment of an architect/contract administrator. The Standard Building Contract (using the Contractor's Designed Portion) or Intermediate Building Contract with Contractor's Design may be more appropriate in these circumstances.

The price and payment structure of the Design and Build Contract is based on a fixed price lump-sum with stage or periodic payments to the contractor. Provisions are included for collaborative working, sustainability, advanced payment, bonds (advance payment, off-site materials, and retention), third party rights and collateral warranties. The contract can also be used on private or public sector projects.

For use with the Design and Build Contract, the JCT publishes the Design and Build Sub-Contract Agreement (DBSub/A) and Design and Build Sub-Contract Conditions (DBSub/C). This sub-contract can only be used where the main contract is the Design and Build Contract, and can be used whether or not the sub-contractor has any responsibility for designing the sub-contract works. The basis of payment is also flexibly drafted, as the sub-contract can be used for sub-contract works that are to be carried out on the basis of an adjusted sub-contract sum (e.g. adjustment for variations, etc.), or by complete re-measurement. Provisions are also included for collaborative working, sustainability and bonds (off-site materials and retention).

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As well as the main contract and sub-contract, the JCT also publishes two guides for use with the Design and Build suite of contracts:

- Design and Build Contract Guide (DB/G); and
- Design and Build Sub-Contract Guide (DBSub/G).

Major Project Construction Contract

The JCT's Major Project Construction Contract (MP) is also designed for use where the design and build procurement route has been chosen. However, unlike the Design and Build Contract, the Major Project Construction Contract is stated to be for use on large scale construction projects where major works are involved. Therefore, the JCT recommends that the contract is used by employers who regularly procure large-scale construction work, and that the work is carried out by contractors (and sub-contractors) with the experience and ability to take greater risk than would arise under other JCT contracts.

The Major Project Construction Contract is also shorter and simpler than the Design and Build Contract because the parties are assumed to have their own in-house contractual and administrative procedures to carry out the contract.

Because this form of contract is designed for use with the design and build procurement route, under this contract the contractor is responsible for both the construction of the works and completing the design of the works. The employer will prepare his requirements for the project and provide these to the contractor. Among other things, the requirements will detail the contractor's level of design responsibility.

The scale of design work to be carried out by the contractor can vary. The contractor may be required just to complete the design based on a concept provided by the employer or the contractor may be required to carry out virtually the whole of the design for the project. This could be done either via the contractor's own in-house design team or through engaging a specialist design team. The Major Project Construction Contract also enables the employer to transfer to the contractor (via a novation) any members of the design team (e.g. an architect) that the employer initially engaged for the project. The contractor can then use that design team to complete the design for the project. The contractor will also take responsibility for those services that the novated design team carried out prior to the novation, as well as their services after the novation.

Payment to the contractor is on a fixed price lump-sum basis, but the flexibility of the pricing document enables the parties to agree a range of payment options. These include interim valuations, stage payments, scheduled payments and/or any other terms that the parties might agree. The contract also provides for a high degree of flexibility regarding the insurance arrangements that the parties wish to put in place for the project. This is because large construction projects often use specific, bespoke, insurance arrangements.

Because of these differences in approach, the JCT considers that the Major Project Construction Contract will be most effective where both the employer and contractor, their teams of advisers and sub-contractors are experienced in detailed risk management and undertaking large commercial projects.

For use with the Major Project Construction Contract, the JCT publishes the Major Project Sub-Contract (MPSub). This sub-contract can only be used where the main contract is the Major Project Construction Contract, but can be used whether or not the sub-contractor has any responsibility for designing the sub-contract works. The basis of payment is also flexibly drafted, as the sub-contract can be used for sub-contract works that are to be carried out on the basis of an adjusted sub-contract sum (e.g. adjustment for variations, etc.) or by complete re-measurement. Provisions are also included for collaborative working and sustainability.

As well as the main contract and sub-contract, the JCT also publishes two guides for use with the Major Project suite of contracts:

- Major Project Construction Contract Guide (MP/G); and
- Major Project Sub-Contract Guide (MPSub/G).

Management Building contracts

The JCT's suite of Management Building contracts is designed for use where the management contracting procurement route has been chosen. Where a project is carried out via the management contracting procurement route, the employer will appoint a management contractor to oversee the works, who in turn appoints a series of works contractors to carry out the construction, and manage the project and the works contractors for a fee. The JCT's Management Building Contract (MC) is the contract that is used by the employer to appoint the management contractor.

Under the JCT's Management Contract, the employer provides the design to the management contractor (although this may not be complete when the works start) along with drawings and a specification. The price paid to the management contractor is the prime cost of the project plus a fee for managing the project and the works contractors. The contract also includes provisions for collaborative working, sustainability, third party rights and collateral warranties. The Management Contract can also be used on both private and public sector projects.

In addition to the Management Contract between the employer and management contractor, the JCT also publishes the form of Works Contract between the management contractor and works contractors, a direct agreement, collateral warranties, and a guide:

- Management Works Contract Agreement (MCWC/A)
- Management Works Contract Conditions (MCWC/C)
- Management Works Contractor/Employer Agreement (MCWC/E)

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- Management Contractor Collateral Warranty for a Funder (MCWa/F)
- Management Contractor Collateral Warranty for a Purchaser or Tenant (MCWa/P&T)
- Works Contractor Collateral Warranty for a Funder (WCWa/F)
- Works Contractor Collateral Warranty for a Purchaser or Tenant (WCWa/P&T); and
- Management Building Contract Guide (MC/G).

Construction Management contracts

The JCT's suite of Construction Management contracts is designed for use where the construction management procurement route has been chosen. Thus, the JCT's Construction Management contracts are for use on construction projects where the employer appoints separate trade contractors to carry out the works and a construction manager to oversee the completion of the works for a fee.

As such, the suite of contracts is used where separate contractual responsibility for design, management and construction of the project is desired. The employer provides the design and enters into direct separate Trade Contracts (the Construction Management Trade Contracts (CM/TC)) with suppliers to carry out the construction of the works. The employer appoints the construction manager (using the Construction Management Appointment (CM/A)) to manage the project and act as an agent on the employer's behalf, issuing instructions, making decisions and preparing certifications. The construction manager also administers the conditions of the Trade Contracts.

Therefore, in addition to the construction management appointment between the employer and construction manager, the JCT also publishes the form of Trade Contract between the employer and the trade contractors, collateral warranties, and a guide:

- Construction Management Trade Contract (CM/TC)
- Construction Manager Collateral Warranty for a Funder (CMWa/F)
- Construction Manager Collateral Warranty for Purchaser or Tenant (CMWa/P&T)
- Trade Contractor Collateral Warranty for a Funder (TCWa/F)
- Trade Contractor Collateral Warranty for a Purchaser or Tenant (TCWa/P&T); and
- Construction Management Guide (CM/G).

JCT – Constructing Excellence Contract

The JCT has collaborated with Constructing Excellence to develop the JCT – Constructing Excellence Contract.

Constructing Excellence was formed in 2003 through the amalgamation of a number of cross-industry bodies that had been formed to drive change in the construction industry following publication of Sir Michael Latham's 1994 report *Constructing the Team* and Sir John Egan's 1998 report *Rethinking Construction*. It is a cross-sector, cross-supply chain, member-led organisation working to produce a better built environment.

The JCT – Constructing Excellence Contract (CE) can be used to procure a range of construction services and is specifically tailored for use in partnering and where participants wish to engender collaborative and integrated working practices.

The contract is designed for use throughout the supply chain for the appointment of main contractors, sub-contractors, and consultants. It can be used whether or not the supplier is to carry out design, and the supplier's design input (as either contractor or consultant) can vary.

The contract expressly underpins collaborative working and the formation of integrated teams when used with the Project Team Agreement, providing for the use of a risk register, risk allocation schedules and performance indicators. The Project Team Agreement (CE/P) is used where members of the project team are to enter into a multi-party painshare/gainshare arrangement.

A JCT – Constructing Excellence Contract Guide (CE/G) is also published that covers both the JCT – Constructing Excellence Contract and the Project Team Agreement.

Measured Term Contract

The JCT's Measured Term Contract (MTC) is designed for use by both private and public sector employers who have a regular flow of maintenance, minor works and improvements projects that they would like carried out by a single contractor over a specified period of time and under a single contract.

Works are instructed to the contractor from time to time by way of 'orders'. A contract administrator is normally appointed by the employer to administer the conditions, issue orders, describe the works and completion dates and certify payments.

This is a 're-measurement' type of contract. The price of the contract is based on the measurement and valuation of each order according to the prices in an agreed schedule of rates.

A Measured Term Contract Guide (MTC/G) is also published that provides a general introduction to the Measured Term Contract and checklists of information which is required to complete the contract.

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Prime Cost Building Contract

The Prime Cost Building Contract (PCC) is the JCT's contract for use where the contractor is procured on a traditional basis and is to be paid on a cost reimbursement or cost plus payment structure. The JCT states that the contract is designed for private or public sector projects that require an early start on site, often for alterations or urgent repair work (such as fire damage). The exact nature and extent of the work is not known until the project is underway, so full design documents are not completed until work has commenced.

It is to be used where detailed contract provisions are necessary and the employer is to provide a specification describing and showing the items of work. Drawings may also be provided. An architect/contract administrator and quantity surveyor administer the conditions.

Under the Prime Cost Building Contract the work proceeds on the basis of a brief specification, drawings (if any) and an estimate of cost. The contractor is paid the prime cost of the works, as well as a contract fee in respect of its non-site overheads and profit. The fee can be a lump sum, which is adjusted if the prime cost is more or less than that estimated in the contract by a certain percentage. The fee can also be calculated as a 'percentage fee' based on the actual prime cost incurred. The fee can also be changed if the employer changes the nature and scope of the works outlined in the schedules.

Therefore, there is a higher risk for the employer in terms of cost. The cost of the project depends on the ability of the contractor to work efficiently and carry out the works as economically as possible. Provisions are included in the contract to help keep the expenditure of the prime cost to a minimum.

A Prime Cost Building Contract Guide (PCC/G) is also published that provides a general introduction to the Prime Cost Building Contract.

Framework Agreement

The JCT's Framework Agreement (FA) operates to provide a structure in which the parties can enter into multiple contractual arrangements over a period of time. It also seeks to engender a positive and collaborative relationship between the parties.

The Framework Agreement is designed for use by employers who procure work on a regular basis and want to capture the benefits of long-term relationships within the supply chain. For example, the Framework Agreement can be used by a high street bank to engage a contractor to fit-out and refurbish a number of bank branches over a certain period of time. The Framework Agreement puts in place the process to enable the parties to enter into the individual contracts for the carrying out of the required works. This means that the individual call-off orders are contracts in their own right, rather than mere instructions to carry out work.

The Framework Agreement can be used in an employer-contractor relationship, or can be used further down the supply chain between a contractor and its sub-contractors and/or suppliers. The Framework Agreement can be used to procure multiple projects or could be used on a single-project basis where engendering a collaborative approach is desired.

Because the Framework Agreement is designed to engender a collaborative approach it contains many contractual provisions that are not found within any of the other JCT main contracts. For example, the Framework Agreement contains provisions dealing with organisational structures and decision making, collaborative working, the supplier's supply chain, the sharing of information and know-how, early warning, performance indicators and a team approach to problem solving.

Repair and Maintenance Contract

The JCT's Repair and Maintenance Contract (RM) is designed for use on individual projects that involve a defined programme of repair and maintenance works to specified buildings or sites. This contract is primarily for use by local authorities and other employers who regularly place small and medium-size contracts for jobbing work, and are sufficiently experienced that an independent contract administrator is not required.

The JCT states that the Repair and Maintenance Contract is not suitable for periodic repair and maintenance over a fixed period of time. Using the JCT's Measured Term Contract may be more appropriate in these circumstances. The Repair and Maintenance Contract is also not suitable on projects for private home owners.

Home Owner contracts

The JCT's Home Owner contracts are designed specifically for people looking for the benefits and protection of a contract when appointing consultants or contractors to carry out their building work.

The JCT currently publishes a Building Contract and Consultancy Agreement for a Home Owner/Occupier (HO/C and HO/CA) and a Building Contract for a Home Owner/Occupier who has not appointed a separate consultant to oversee the work (HO/B). There is also a freely available JCT Home Owner Repair and Maintenance Contract (HO/RM).

2.4.2 NEC

The NEC is a division of Thomas Telford Limited, which is a wholly owned subsidiary of the Institution of Civil Engineers (ICE). The ICE is the owner and developer of the suite of New Engineering Contracts (NEC).

The NEC is a suite of standard form contracts, each of which has the following characteristics:

- their use is intended to stimulate good management of the relationship between the two parties to the contract and of the work included in the contract (e.g. in each NEC contract there is an obligation on the parties to 'act in a spirit of mutual trust and co-operation')

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- they are intended to be used in a wide variety of commercial situations, for a wide variety of types of work and in any location; and
- they are intended to be clear and simple documents, using language and a structure which are straightforward and easily understood.

The NEC suite of contracts can be used on private and public sector projects, including civil engineering, general commercial construction, nuclear, utilities, infrastructure, facilities management, oil and gas, and purchasing and supply. They are also intended for global application and are being adopted for many multi-disciplinary projects by clients in nearly 20 countries, e.g. Australia, New Zealand and South Africa.

The NEC suite of contracts has also received endorsement from a number of governmental and industry bodies in the UK and internationally. This included an endorsement from the Construction Clients' Board of the UK Cabinet Office which recommended NEC3 for use on all public sector construction projects. The JCT Constructing Excellence Contract and PPC2000 have also both subsequently received endorsement. Therefore, when working on public sector construction projects there may be little or no choice regarding which form of construction contract to use.

The first edition of the NEC documents was published in 1993. The second edition (NEC2) followed in 1995 and the third edition of the NEC suite of documents (known as NEC3) was published in June 2005. Throughout these editions, the number of documents within the NEC suite grew. The latest version of the NEC3 suite was published in April 2013 and now extends to 39 documents (including a series of 'How To' guides). The NEC3 contracts are also supplemented by a comprehensive website (www.neccontract.com), guidance notes and flow charts, various public events, user groups and training courses.

The style of the NEC3 contracts is noticeably different to most other standard form contracts. The contracts are relatively short when compared to other standard form contracts, involve less text, are written in the present tense, have short sentences, use bullet points and contain no cross referencing between clauses. The same structure and same definitions are used, as far as possible, across the suite of contracts. The intention is for everybody in the construction industry to be able to understand and use these contracts, not just lawyers.

In contrast to other standard form construction contracts, the NEC contracts are structured in a modular format, with different contract options being selected to suit the needs of the particular project. Therefore, each contract contains a set of core clauses that always apply. These are then supplemented by a series of main options (relating to payment) dispute resolution options and secondary options (e.g. relating to delay damages, bonds and guarantees) which the parties can choose to apply depending on the needs of the particular project.

The philosophy of the NEC contracts is also quite different to other mainstream construction contracts. For example, a feature of the NEC contracts is their focus on good project management. There are various aspects to this. The contracts are more than a statement of rights, obligations and sanctions. They go further than other standard forms in trying to encourage a successful project outcome. This can be seen in the emphasis on communications, programming, cooperation between the parties (in relation to each of which the contracts are unusually prescriptive), the early identification of matters which may prejudice the successful outcome of the project (early warning) and the early resolution of contractors' claims (Compensation Events) based on forecast effect rather than a retrospective examination of what actually happened. Dealing with matters on a projected basis means there is no final account type process of the kind in other forms.

The programme is a key document in an NEC contract. It is crucial to administering the contract, and requires constant updating and is backed-up with sanctions if it is not provided and/or updated. This means that aspects of the NEC contracts are time consuming to administer, in particular the programming and compensation event provisions, which may make NEC3 contracts less appropriate for small projects.

In further contrast to other standard form construction contracts, whose various suites of contract have been developed for use with specific procurement routes, the NEC3 contracts have been developed for use in three broad areas: (i) the procurement of works; (ii) the procurement of services; and (iii) the supply of goods and services. The appropriate contractual options are then chosen to make the contracts work with the desired procurement and payment routes.

The contracts contained in the NEC3 April 2013 suite are as follows:

Contracts for the procurement of works

The flagship contract in the NEC suite is the Engineering and Construction Contract (ECC). This is the contract for use where an employer wishes to appoint a contractor to carry out engineering and construction work.

As noted previously, the ECC is structured in a modular format. There are nine core clauses (e.g. dealing with the contractor's main responsibilities, time, the payment process and Compensation Events) that will always apply to the contract.

The parties then choose one of six main option clauses (A–F). The main options allow the employer different ways of pricing the project and different ways of paying the contractor. The main options do not change the remainder of the ECC's provisions (except to deal with pricing and payment), but they are more than a set of payment schedules. The main option clauses are as follows:

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- 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; and
- Option F – Management contract.

Options A–E descend in terms of certainty of price for the employer, reflecting similarly descending certainty of work scope. Each option provides merely a different type of pricing basis from lump sum (Option A – higher risk to the contractor) to cost reimbursable (Option E – lower risk to the contractor). Options C and D are Target Cost contracts that contain a painshare/gainshare arrangement so that the employer and contractor share any cost savings or overspend. Option F (Management Contract) does not differentiate between the construction management and management contracting procurement routes. It is perhaps suitable for contracts with a high degree of specialist contractor input. Specialist contractors are paid on the basis of prime cost and the contractor tenders preliminaries and fee percentage.

Following selection of the main option, the parties will select a dispute resolution option – either Option W1 or W2. Option W2 must be chosen if the contract is governed by the UK's *Housing Grants, Construction and Regeneration Act 1996*. The parties can then select a number of secondary option clauses to apply to the contract. Again, if the contract will take place in the UK, there are certain secondary options (e.g. Y(UK)2 and Y(UK)3) that should be chosen. The parties can also opt to amend the ECC and import additional clauses through use of Option Z.

This modular format means that the ECC is drafted on a 'jurisdiction neutral' basis and so can be used either in the UK or internationally. If the ECC is being used internationally, Option Z can be used to import any jurisdiction-specific requirements and the NEC's website also has sections referring to use in certain overseas jurisdictions.

Because the ECC is structured on a flexible basis, it can also be used regardless of the level of design responsibility that the contractor will have. The contractor's design responsibility will be detailed in one of the contract documents (the Works Information) that makes up the ECC. The contractor may have little or no responsibility for the design of the works, or could have full responsibility for design.

Accompanying the terms and conditions of the ECC are three key documents that help make up the ECC: (i) the Contract Data; (ii) the Works Information; and (iii) the Site Information. The Contract Data details the project-specific requirements for the contract (e.g. a description of the works, the identity of people carrying out various key roles, and dates for commencement and completion of the works). The Works Information is critical because the contractor is obliged to carry out the works in accordance with the Works Information. Certain Compensation Events

(which entitle the contractor to additional time and/or money) are also determined by reference to what is stated in the Works Information. The Works Information therefore sets out the detailed requirements for the carrying out of the works (e.g. details of which parts, if any, of the works the contractor is to design). The Site Information contains the factual material that concerns the site, boreholes, soil reports, etc. The information is usually provided by the employer. In addition to these key documents, there is a Schedule of Cost Components (and a Shorter Schedule of Cost Components) which helps to define certain costs which are paid to the contractor.

The employer is infrequently mentioned in the ECC. Instead, the administration of the ECC is generally carried out by a project manager and a supervisor. The project manager acts for the employer, issuing instructions, approving programmes, assessing Compensation Events and payments, etc. The supervisor performs a role that is similar to a clerk of works, only more so. The supervisor is particularly prominent in the provisions relating to defects in the works.

As well as the ECC, the NEC also publishes the following documents relating to the procurement of works:

- NEC3 Engineering and Construction Contract Guidance Notes
- NEC3 Engineering and Construction Contract Flow Charts
- NEC3 Engineering and Construction Short Contract (ECSC)
- NEC3 Engineering and Construction Short Contract Guidance Notes and Flow Charts
- NEC3 Engineering and Construction Subcontract (ECS); and
- NEC3 Engineering and Construction Short Subcontract (ECSS).

Contracts for the procurement of services

The two principal contracts produced by the NEC relating to the procurement of services are the Professional Services Contract (PSC) and the Term Service Contract (TSC). The Professional Services Contract is used to procure services for a particular project, whereas the Term Service Contract is used to procure services (possibly relating to a number of different projects) over a specified period of time.

The PSC can be used to appoint a professional consultant to carry out the role of project manager or supervisor under the Engineering and Construction Contract, or could be used to appoint a designer (e.g. an architect) or other professional consultants. It follows the modular structure present in all the NEC contracts and has four main options for its pricing mechanism:

- Option A – priced contract with activity schedule (essentially a lump sum contract)
- Option C – target contract (essentially a cost reimbursable contract with a painshare/gainshare mechanism)

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- Option E – time based contract (essentially a cost reimbursable contract); and
- Option G – term contract (this contains reimbursable and lump sum payment elements), for use where the employer wishes to have the right to issue Task Orders to the consultant during a specified period.

Following selection of the main pricing option, there are also a series of dispute resolution clauses ('W clauses') and secondary option clauses ('X', 'Y' and 'Z' clauses) for the parties to select depending on the needs of the particular project and the jurisdiction (e.g. the UK) in which the project is taking place. The key document in the PSC is the Scope. This specifies and describes the services to be provided and states any constraints on how the consultant provides the services.

The TSC can be used to procure a wide variety of services, not just those related specifically to construction. For example, the NEC's Term Service Contract Guidance Notes state that the TSC:

'has been designed for use in a wide variety of situations, and is not restricted to construction. It is essentially a contract for a Contractor to provide a service (not limited to a professional or construction service) to an Employer.'

As such, the TSC can not only be used to procure professional consultancy services related to construction, but can also be used to procure services such as landscaping and cleaning, highways maintenance, and housing maintenance and repairs.

The three main pricing options to choose from for the TSC are as follows:

- Option A – priced contract with price list
- Option C – target contract with price list (essentially a cost reimbursable contract with a painshare/gainshare mechanism); and
- Option E – cost reimbursable contract (essentially a cost reimbursable contract, but without any painshare/gainshare mechanism).

Following selection of the main pricing option, there are also a series of dispute resolution clauses ('W clauses') and secondary option clauses ('X', 'Y' and 'Z' clauses) for the parties to select depending on the needs of the particular project and the jurisdiction (e.g. the UK) in which the project is taking place. The key document in the TSC is the Service Information and the contract is administered by a service manager appointed by the employer. Individual pieces of work are instructed to the contractor via Task Orders.

As well as the PSC and the TSC, the NEC also publishes other documents relating to the procurement of services, as follows:

- NEC3 Professional Services Contract Guidance Notes and Flow Charts

- NEC3 Professional Services Short Contract (PSSC)
- NEC3 Professional Services Short Contract Guidance Notes and Flow Charts
- NEC3 Term Service Contract Guidance Notes
- NEC3 Term Service Contract Flow Charts
- NEC3 Term Service Short Contract (TSSC); and
- NEC3 Term Service Short Contract Guidance Notes and Flow Charts.

Contracts for the supply of goods and services

The NEC3 Supply Contract (SC) is recommended for use in the local and international procurement of high-value goods and related services, including design. Examples provided by the NEC of what can be procured under the SC include transformers, turbine rotors, rolling stock, loading bridges, transmission plant, and cable and process plant, together with lower risk goods and associated services such as building materials, simple plant and equipment, stationery, PPE, manufacturing parts, components and store items.

The SC can be used at various tiers of the supply chain. The payment and pricing mechanism is fixed (there are no choices) but there are a variety of secondary option clauses to choose. The contract is administered by a 'supply manager' appointed by the 'purchaser'.

As well as the SC, the NEC also publishes the following documents relating to the supply of goods and services:

- NEC3 Supply Contract Guidance Notes
- NEC3 Supply Contract Flow Charts
- NEC3 Supply Short Contract (SSC); and
- NEC3 Supply Short Contract Guidance Notes and Flow Charts.

2.4.3 GC Works

The GC (Government Contract) Works suite of contracts evolved following World War 2 to become standard forms of contract used by the UK Crown and the government for the procurement of building and civil engineering projects such as prisons and military establishments, etc.

A fundamental review and revamping of the GC Works contracts by the Property Advisers to the Civil Estate (PACE) took place in 1998. This government agency directed the production of the suite of contracts in conjunction with other government departments such as the DTI, Scottish Office, Prison Service, Home Office and Ministry of Defence. The impetus for the re-drafting of the GC Works contracts came from the desire to embrace the recommendations of the Latham Report, with its emphasis on partnering and a non-adversarial approach to contracting, together with the need to implement the essential provisions of the *Housing Grants, Construction and Regeneration Act 1996*.

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Between 1998 and 2000, the suite was expanded and the resulting suite of contracts was as follows:

GC/Works/1 Building & Civil Engineering Major Works with Quantities (1998)

This contract is for use with bills of quantities, where all or most quantities are firm and not subject to re-measurement and a lump sum contract is required.

GC/Works/1 Building & Civil Engineering Major Works without Quantities (1998)

For use where lump sum tenders are to be invited based on a specification, drawings and schedule of rates but not bills of quantities.

GC/Works/1 Single Stage Design and Build (1998)

This is for use where a lump sum is required and the contractor is to prepare or complete the design. It is only suitable for a single stage design process whereby the design is completed in the contractor's proposals. It is not suitable for use where a second stage design process is intended after the contract has commenced.

GC/Works/1 Two Stage Design and Build (1999)

This envisages a separate design phase for which the contractor is paid a design fee. Before work on site commences, a design process event has to be achieved. This will have two elements – determination of the contract sum and achievement of a design process milestone, usually the completion of the design itself. The employer has absolute discretion whether or not to proceed with the construction phase of the contract.

The two design and build contracts were also subject to an amendment, 'Achieving Excellence' (Amendment 1, 2000).

GC/Works/1 Construction Management Trade Contract (1999)

There are two versions available, with Quantities and without Quantities.

GC/Works/2 Building and Civil Engineering Minor Works (1998)

This is designed for use in projects with a minimum value of £25,000 and a maximum value of £200,000. It is also said to be suitable for demolition works of any value. The contractor's tender is based on a specification and drawings only, but there is an option for a schedule of rates for the valuation of variations.

GC/Works/3 Mechanical & Electrical Engineering Works (1998)

This is for use when lump sum tenders are to be invited on the basis of specification and drawings, with the optional use of bills of quantities or a schedule of rates. The contract should be suitable for use in relation to mechanical and electrical works of any value.

GC/Works/4 Building, Civil Engineering, Mechanical & Electrical Engineering Small Works (1998)

This contract is designed for building, civil engineering or mechanical and electrical works with a value up to £75,000. Lump sum tenders are submitted on the basis of a specification and/or drawings only.

GC/Works/5 Consultant's Appointment (1998-2000)

As well as a single project appointment, there is a Framework Agreement where consultancy services are required on a call-off basis over a period of years.

GC/Works/6 Dayworks Term Contract (1999)

This is for works of a 'jobbing nature', where a labour charge is based on an hourly rate. Materials are charged at cost plus a percentage addition.

GC/Works/7 Measured Term Contract (1999)

This allows the employer to issue orders as and when required, based on a schedule of rates, and is to be used for a period of three to five years.

GC/Works/8 Specialist Term Contract for Maintenance of Equipment (1999)

This contract is for use where the employer requires specified maintenance of equipment, where the work can be costed per task. The contractor prices a schedule of work and interim payments are made on the basis of work carried out.

GC/Works/9 Lump Sum Term Contract for Operation, Maintenance and Repair of M&E Plant, Equipment and Installations (1999)

This is for use in relation to a single establishment or complex of buildings, with a contract period of one to five years. The price includes one-off repairs up to a specified maximum cost per repair.

GC/Works/10 Facilities Management (2000)

This facilities management version of the contract allows the appointment of a facilities management contractor either as a one-stop shop or as a managing agent. It can be used with either input or output specifications and on one or more sites.

GC/Works/11 Minor Works Term Contract (2000)

This is for activities such as window cleaning or the maintenance of gardens or grounds at a single establishment or complex of buildings. It can be used with either an input or an output specification.

However, following publication of these contracts, use of the GC Works documents declined. This was in part due to adoption of the NEC suite of contracts for public sector projects. As a consequence, the GC Works contracts are now out of date, not having been updated since they were published in 1998–2000. They are still used occasionally for public sector projects, but are still perceived as 'employer friendly' contracts. Today, a GC Works contract would require extensive amendment (e.g. to the payment

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and dispute resolution provisions) in order to bring it into line with current law.

2.4.4 The Infrastructure Conditions of Contract

From 1945, the Institution of Civil Engineers (ICE), in collaboration with the Association for Consultancy and Engineering (ACE) and the Civil Engineering Contractors' Association (CECA), published a suite of engineering contracts known as the ICE Conditions of Contract (the ICE Contracts). After many years the ICE decided to withdraw from its involvement with the ICE Contracts and the ACE and CECA took over joint responsibility for their production.

In August 2011 the ACE and CECA re-printed and re-branded the ICE Contracts as the Infrastructure Conditions of Contract (the ICC). Further information can be found on the ICC's website (www.iccsuite.com). The ICC suite of contracts now includes a Measurement Version (which is effectively a re-print of the old 7th Edition of the ICE Conditions of Contract), a Design and Construct Version and Target Cost Version, as well as more specialist contracts such as the Ground Investigation Version and Archaeological Investigation Version.

In October 2011 an amendment sheet was published for use with the ICC suite of contracts to bring them into line with the amendments to the *Housing Grants, Construction and Regeneration Act 1996*.

The ICC contracts are designed for use on civil engineering and infrastructure projects and are based on the old ICE contracts. The full suite of ICC contracts published in August 2011 is set out below. They are each supported by comprehensive guidance notes.

Measurement Version

This is one of the standard contracts used for UK civil engineering and infrastructure work. The ACE state that the contract has been drafted by employers, consultants and contractors to provide a clear and standardised contract specifically tailored for civil engineering and infrastructure projects.

The Measurement Version is for use on a traditionally procured project where the contractor carries out the construction of the works in accordance with a design provided by or on behalf of the employer. Valuation of the contractor's works is by measurement. This form of contract is intended to provide a comprehensive and clear set of conditions, with a fair balance of risks between employer and contractor and with administration by an independent engineer.

Design and Construct Version

This contract is for use where the design and build procurement route has been chosen. Therefore, the contractor is responsible for all aspects of design and construction, including any design originally provided by or on behalf of the employer unless otherwise stated. Payment to the contractor is on a lump sum basis but other forms of payment may be used.

The contract encourages the benefits of team working and current procurement initiatives. If the procedures are followed, the parties to the contract will be provided with an 'early warning' of circumstances that may give rise to additional costs or delay in completion of the contract in order to assist in the mitigation or prevention of such events.

The ACE state that the contract is based on the Design and Construct Version of the ICE Conditions of Contract and will be familiar to those who know that contract.

Term Version

Under this contract, a contractor is appointed to carry out such work for an agreed period of time (the term), carrying out such packages of work as may be required by the employer under conditions set out in the contract. The Term Version uses call-off orders (known as Works Orders) to accommodate rolling renewal or replacement requirements (based on re-measurement or a lump-sum quotation for a particular operation). The engineer also maintains its traditional role of advising the employer, designing and supervising the works and certifying payment.

The ACE envisages the Term Version to be suitable for planned maintenance or refurbishment work, as well as for emergency works where a contractor may be on call.

The contract is based on the Term Version of the ICE Conditions of Contract and will be familiar to those who know that contract.

Minor Works Version

This is a traditional procurement contract (i.e. employer designed) for minor civil engineering works.

The Minor Works Version is based on the former ICE Conditions and includes amendments resulting from experience in use, including a responsibility on the employer to provide the contractor with all information he has relevant to the works and a right for the engineer to have access to work in hand whether on or off site. In view of the short duration of these contracts, retention provisions have been removed.

Target Cost Version

This contract is the newest member of the Infrastructure Conditions of Contract family and has been produced due to industry demand.

This contract allows the employer, usually with the assistance of the contractor, to set a clear target for the cost of the civil engineering works to be carried out, in order to avoid projects overrunning on cost and deadline. The contract also includes a painshare/gainshare mechanism so that the employer and contractor can share any cost savings or overspend.

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The ACE also states that to utilise the Target Cost Version effectively, a more open style of control and management is required which will permit an early and joint approach to the identification and management of risks. This is intended to lead to better channels of communication between employer and contractor, at every project stage.

Ground Investigation Version

The Ground Investigation Version is based on the traditional pattern of an investigation designed by an engineer and carried out by a specialist contractor.

The ACE states that this contract is intended for the situation where the employer wishes to develop a site and has geotechnical specialists to advise him, and who will carry out any initial desk study, identify the geotechnical requirements of the project and design a ground investigation to suit those requirements.

Archaeological Investigation Version

This is a specialist contract relating to archaeological investigations. It can be used whenever there is a need to procure an archaeological investigation, e.g. as part of the planning process or as part of an Environmental Impact Assessment.

Partnering Addendum

This is a partnering agreement, where parties to a contract work together and collaborate to deliver a project.

The ACE states that the Partnering Addendum *'aims to deliver an effective and flexible mechanism for multi-party partnering using Infrastructure Conditions of Contract, ACE Agreements 2009 and CECA Forms of Subcontract'*. The document governs the implementation of the partnering arrangement and the relationship between the partners.

Finally, at the time of writing this guidance note, the ACE and CECA have just begun the process of revising the ICC suite of contracts. The ICC's Development Forum has produced a 'Consultative Draft' of the ICC Measurement Version and, once this has been revised, the Development Forum intends to fully revise the whole ICC suite of contracts. This should also include a template sub-contract for use with the main contracts. Therefore, readers should look out for revised versions of the ICC suite of contracts being published at some point following the publication of this guidance note.

2.4.5 Institution of Chemical Engineers (IChemE)

The Institution of Chemical Engineers (IChemE) (www.icheme.org) was founded in 1922 as a professional institution for chemical and process engineers.

The IChemE currently publishes two suites of contracts – one for use in the UK and another for use internationally. Both suites are used extensively across a wide range of process industries and are suitable for the provision of any performance-based plant or project. The contract

forms have been formulated to reflect best practice and relationships within the process plant sector. This guidance note will focus on the UK suite of contracts.

The IChemE first published its contracts in 1968 and the latest versions (including helpful introductory guidance notes) were published in February 2013. The current suite of IChemE contracts for use in the UK is as follows:

IChemE Form of Contract for Lump Sum Contracts (the 'Red Book'), 5th edition, 2013

The Red Book is specifically published for lump-sum contracts for the design, construction and commissioning of performance based process plants. Therefore, the contract has been prepared with process plants and manufacturing facilities in mind, but the IChemE acknowledges that the contract is also being used in other sectors such as nuclear, pharmaceuticals, water and tunnelling.

The Red Book is for use where the design and build procurement route has been selected and is a 'turnkey' contract. The contractor must go beyond the usual responsibility of a design and build contractor on a construction project, taking responsibility for designing and constructing the plant and for carrying out performance tests to establish that the plant works properly.

As the Red Book is a lump sum contract, the cost of completing the works is at the contractor's risk. The employer (known in the IChemE contracts as the 'purchaser') and contractor will agree a price for completing the works and that is what will be paid to the contractor regardless of the actual costs incurred by the contractor (subject to certain exceptions, such as variations instructed by the purchaser).

IChemE Form of Contract for Reimbursable Contracts (the 'Green Book'), 4th edition, 2013

Like the Red Book, the Green Book is a turnkey contract requiring the contractor to design and construct the plant and to take responsibility for performance testing the plant to demonstrate that it works properly.

However, it is the pricing and payment mechanism that is one of the key differences between the Red and Green Books. The Green Book is a 'cost reimbursable' contract which means the contractor is reimbursed for all the actual costs it incurs in providing the goods and services that the purchaser requires. This includes any corrective costs arising from design and construction errors, but will depend on the exact terms of the contract and the contractor's exercise of normal professional skill and care.

Because of this, the purchaser takes much greater financial risk under the Green Book than he would do under the Red Book. The Green Book may therefore be best suited to a sophisticated and well informed purchaser who is experienced in the relevant sector, and who has the necessary skills and expertise to work with the contractor in the design and construction of the works.

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IChemE Form of Contract for Target Cost Contracts (the 'Burgundy Book'), 2nd edition, 2013

The Burgundy Book is specifically published for target cost contracts for the design, construction and commissioning of performance based process plants.

The IChemE states that the intention of its target cost contract is to encourage both parties in the contract to work together in order to find ways of carrying out the work as efficiently as possible and to be rewarded as a result (i.e. painshare/gainshare). The Burgundy Book is used for either setting the target cost at the time of making the contract or for agreeing the target cost during the contract, typically when the detailed scope of work has been agreed but before commencement of any construction or manufacture of the plant.

In terms of financial risk for the purchaser, the Burgundy Book therefore sits somewhere between the lump sum contract (Red Book) and cost reimbursable contract (Green Book).

IChemE Form of Contract for Minor Works (the 'Orange Book'), 2nd Edition, 2003 (reprinted 2006)

The Orange Book has been developed for 'minor' packages of work within an existing process plant but for which the far more comprehensive forms – whether for contracts based on 'lump sum' (the 'Red Book'), 'reimbursable' (the 'Green Book') or 'target cost' (the 'Burgundy Book') forms of payment – would be both inappropriate and cumbersome.

On the premise that significant items of plant or equipment to be installed by the contractor would be purchased under separate purchase orders and 'free-issued' to the contractor, IChemE envisage that this form of contract would normally be applied for works not exceeding about £250,000 in value. The work would typically comprise activities such as installation of equipment or plant, repair and maintenance of equipment or plant, or modifications to existing facilities.

Note that a revised version of the Orange Book was not produced in 2013. At the time of writing this guidance note, the current version of the Orange Book is the 2nd edition, published in 2003 and reprinted in 2006. If being used today in the UK, the Orange Book needs to be amended to take account of legislative changes that have occurred since 2003 (e.g. the amendments to the *Housing Grants, Construction and Regeneration Act 1996*).

IChemE Form of Contract for Subcontracts (the 'Yellow Book'), 4th edition, 2013

The Yellow Book is a form of subcontract that is designed to be 'back-to-back' with the conditions contained in the Red Book, Green Book and Burgundy Book.

The IChemE states that the Yellow Book is primarily intended for subcontracts that include the design, supply,

site construction/erection/installation and testing of equipment and for when the subcontractor is to supply plant and equipment that will be significant in terms of the main contract plant. Typically, this might be because the subcontractor is to supply a significant process package or system that might be of some size or complexity.

IChemE Form of Contract for Civil Engineering Subcontracts (the 'Brown Book'), 3rd edition, 2013

The IChemE states that the Brown Book is specifically for civil engineering subcontracts in relation to work that is often required prior to the construction of the process elements of a process plant, such as access roadways, foundations and other 'non-process plant' elements. As with the Yellow Book, this subcontract is fully compatible with the Red, Green and Burgundy Books.

2.4.6 FIDIC

FIDIC (www.fidic.org) is an abbreviation of 'Fédération Internationale des Ingénieurs – Conseils' (International Federation of Consulting Engineers), an international federation of associations of consulting engineers representing the profession in their respective countries. It was formed in 1913 and is best known for its range of standard conditions of contract for the construction, plant and design industries.

The FIDIC contracts are the most widely used forms of contract internationally, including by the World Bank for its projects. They are mentioned briefly in this guidance note because some of the FIDIC contracts (e.g. the Yellow Book) are sometimes used as a basis for contracting in the UK (e.g. for the design and construction of offshore windfarms). If being used as a construction contract in the UK, FIDIC contracts would require amendment in order to comply with UK legislative requirements (e.g. the CDM Regulations 2007 and the amended *Housing Grants, Construction and Regeneration Act 1996*).

The FIDIC 'Rainbow Suite' of New Contracts was published in 1999 and includes:

The Red Book: Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer

The 1999 Red Book is suitable for all projects where main responsibility for design lies with the employer (or its representative, the engineer).

The contractor usually carries out the works in accordance with the employer's design. However, the works may also include some elements of contractor-designed civil, mechanical, electrical and/or construction works.

The work done is measured, and payment is made according to a bill of quantities, although there is an option for payment on a lump sum basis.

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The Yellow Book: Conditions of Contract for Plant and Design-Build

The Yellow Book is suitable for all types of projects where the main design responsibility lies with the contractor. In practice, the contractor's designs follow the employer's requirements. For that reason, the testing procedures are usually more complicated than those in the Red Book.

Payment is made on a lump sum basis, usually against a schedule of payments.

The Silver Book: Conditions of Contract for EPC/Turnkey Projects

The Silver Book is intended for EPC (Engineering, Procurement and Construction) arrangements. Under an EPC contract, the contractor is responsible for all the processes and design required to provide a fully equipped facility to the employer that is ready for operation at the 'turn of a key', i.e. a 'turnkey' arrangement.

Under the Silver Book, the contractor assumes time and cost risks that are greater than it would otherwise assume under a Yellow Book.

The Green Book: Conditions of Short Form of Contract

The Green Book is designed for use on projects with a relatively small value, short construction time or involving simple or repetitive work.

Under the Green Book, it does not matter whether the design is provided by the employer (or his engineer/architect if he has one) or by the contractor. It also does not matter whether the project involves construction, electrical, mechanical, or other engineering work.

Additional FIDIC contracts in use since 1999 include:

The Blue Book: Contract for Dredging and Reclamation Works

The Blue Book is designed to be used for all types of dredging and reclamation work and ancillary construction, with a variety of administrative arrangements. Under the Blue Book, it is the employer who designs the project, but this could be modified to provide for some or all of the works to be designed by the contractor.

The Pink Book: Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer (for bank-financed projects only)

The Pink Book is a new version of the FIDIC Red Book called the 'MDB Harmonised Edition'. It was originally published in May 2005 and revised editions were published in March 2006 and June 2010. It is to be used on projects funded by participating Multilateral Development Banks (MDB), such as the World Bank.

The White Book: Client/Consultant Model Services Agreement

The White Book is a consultancy contract for the appointment of a professional consultant (e.g. an architect or engineer). The White Book was first published in 1998 and was last updated in 2006 (4th Edition).

The Gold Book: FIDIC Design, Build and Operate Projects

The Gold Book is the most recently published form of the 'FIDIC rainbow'. The First Edition of the Gold Book was published in September 2008.

The Gold Book combines design, construction, operation and maintenance of a plant in a single contract, and is drafted to be used in Design, Build and Operate (DBO) scenarios.

2.4.7 Project Partnering Contracts

The Association of Consultant Architects (ACA), now in joint venture with the Association for Consulting and Engineering (ACE), currently publishes a number of contracts for use in the UK and internationally that have been specifically drafted for use where the parties wish to adopt partnering principles and behaviours (see www.ppc2000.co.uk). The most commonly used contracts published by the joint venture are:

PPC2000 Standard Form of Contract for Project Partnering (Amended 2013)

The ACA first published its project partnering contract, the PPC2000, in September 2000, revising it in 2008 and again in 2013.

The latest version from 2013 incorporated amendments to the payment terms to comply with the amendments that were made to the *Housing Grants, Construction and Regeneration Act 1996*. It also brought in amendments and clarifications regarding target terms, Building Information Modelling (BIM), Public Sector Payment Periods and Project Bank Accounts.

The PPC2000 is a multi-party contract primarily between the 'client', 'constructor' and the 'client representative'. However, other parties such as specialist contractors and consultants can also join the contract and become part of the partnering team. The contract has a partnering ethos running throughout its terms and includes provisions dealing with incentivisation, continuous improvements, performance indicators, co-operative and transparent exchange of information and a painshare/gainshare mechanism.

The level of the constructor's design responsibility under the PPC2000 will vary according to the requirements of the project and the drafting of the contract. The design of the works is generally to be carried out by the lead designer and any other members of the design team. However, the client can also select a particular option in the PPC2000 which places full responsibility on the constructor for the design, supply, construction and completion of the project, including any design carried out by other partnering team members. The PPC2000 also enables the client to select a 'fitness for purpose' obligation (which may not be covered by the constructor's professional indemnity insurance) and a 'net contribution clause' (which would be more acceptable to the partnering team members and their insurers).

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If being used in Scotland, a Scottish Supplement is published for the PPC2000 that provides alternative attestation clauses and other provisions that are compliant with Scottish law.

SPC2000 Standard Form of Specialist Contract for Project Partnering (Amended 2008)

SPC2000 is a subcontract for use between a 'constructor' and a 'specialist'. It is designed for use where the main contract is PPC2000 and so its provisions are 'back-to-back' with those found in PPC2000.

SPC2000 was last fully amended in 2008, but the ACA has published separate amendments that should be made to SPC2000 to ensure that it complies with the amended *Housing Grants, Construction and Regeneration Act 1996*.

TPC2005 Standard Form of Contract for Term Partnering (Amended 2008)

TPC2005 is a partnering contract for use where the 'client' wishes to appoint the 'service provider' to provide services over the course of a specified period of time. TPC2005 is thus the term version of PPC2000 and contains equivalent provisions to those found in PPC2000.

TPC2005 was last fully amended in 2008, but the ACA has published separate amendments that should be made to TPC2005 to ensure that it complies with the amended *Housing Grants, Construction and Regeneration Act 1996*.

STPC2005 Standard Form of Specialist Contract for Term Partnering (Issue 2010)

STPC2005 is a subcontract for use between a 'service provider' and a 'specialist'. It is designed for use where the main contract is TPC2005 and so its provisions are 'back-to-back' with those found in TPC2005.

STPC2005 was issued in 2010, but the ACA has published separate amendments that should be made to STPC2005 to ensure that it complies with the amended *Housing Grants, Construction and Regeneration Act 1996*.

2.4.8 Others

The publishers and contracts discussed are the main ones currently used in the UK. However, a number of other publishers exist and sometimes produce more specialist contracts for their particular sector. Some of the other publishers are as follows:

Chartered Institute of Building

In April 2013, the Chartered Institute of Building (www.ciob.org) launched its 'Contract for Use with Complex Projects' (CPC2013).

CPC2013 is marketed as being suitable for building and engineering projects, both in the UK and internationally. Its drafters state that it is intended for use by government agencies and companies in a variety of procurement methods (including build only, design and build, and turnkey). It focuses on time management, providing for a dynamic programme (called a works schedule) and a

'project time manager', together with requirements for detailed record keeping. It is ready for use with Building Information Modelling (BIM) and electronic information exchange. CPC2013 also works with a range of design responsibilities – from continuing employer design through to full design of the works by the contractor.

LOGIC

LOGIC (www.logic-oil.com) is a not-for-profit wholly-owned subsidiary of Oil & Gas UK. LOGIC currently supports a suite of 10 standard form contracts (including construction contracts, consultancy appointments, and purchase orders) that are available for use throughout the oil and gas industry. At the time of writing this guidance note, LOGIC is in the process of reviewing and updating all of its standard form contracts. The latest edition of each contract is available on LOGIC's website (www.logic-oil.com/standard-contracts).

The UK government and local authorities

The UK government and local authorities regularly engage with the private sector to construct, maintain and operate assets used by the public sector. They often use Public Private Partnerships (PPP) arrangements such as PFI (now remodelled as Private Finance 2 (PF2)). For more information on such arrangements, see Section 2.2.7.

The UK government produces a number of contracts and guidance for use with its PPP projects. These include the 'Standardisation of PF2 Contracts' produced by HM Treasury, which is designed to ensure standardisation of contract terms across PF2 contracts. This document provides detailed drafting provisions to be incorporated into PF2 contracts either on a 'required' basis (where the exact wording should be used), or on a 'recommended' basis (where the drafting should be used as a basis for adaptation to different sectors). Other examples include contracts to be used for Academies projects and the Priority Schools Building Programme.

Note that while PF2 does not extend to Scotland, Scottish ministers and public sector contracting authorities do regularly enter into PPP-style arrangements on a similar basis.

The Scottish ministers have, through their subsidiary (known as the Scottish Futures Trust (SFT)), produced a standard form Project Agreement for use on most NPD projects (with Transport Scotland having developed an equivalent for roads projects). A user guide has also been produced which provides required and alternative recommended drafting. The SFT has also produced a standard form 'Design Build Finance and Maintain Agreement' (which is almost identical to the NPD equivalent) for use on hub PPP-type schemes.

Finally, SFT has also produced a standard form 'Design and Build Development Agreement' for use on simple design and build schemes being let through the hub programme.

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IMechE/IET

The Institution of Mechanical Engineers (IMechE) (www.imeche.org) and the Institution of Engineering and Technology (IET) (www.theiet.org) issue a range of model forms of general conditions of contract specifically for electrical and mechanical work and consultancy. The contents of these publications are decided by a joint committee of IET/IMechE members and others representing the various interests of the electrical and mechanical engineering industries.

There are seven current 'primary publications', comprising four model forms (MF/1 to MF/4) and three commentaries as follows:

- MF/1 (Revision 6) (2014 edition) (MF/1) – A model form of contract for use in connection with home or overseas contracts for the design, supply and installation of electrical, electronic and mechanical plant, including special conditions for the ancillary development of software. The wording in Revision 6 has also been updated to ensure that the contract can be used internationally.
- MF/2 (Revision 1) (1999 edition) (MF/2) – A model form of general conditions of contract for use in connection with home or overseas contracts for the supply of electrical, electronic or mechanical plant.
- MF/3 (Revision 1) (2001 edition) (MF/3) – A model form of general conditions of contract for use in connection with home contracts for the supply of electrical and mechanical goods.
- MF/4 (2003 edition) (MF/4) – A model form of terms and conditions of engagement for an engineering consultant, for use in connection with home or overseas projects.
- Commentary on MF/1 (Revision 5)
- Commentary on MF/2 (2000 edition)
- Commentary on MF/4 (2003 edition)

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3 Practical application (Level 2 – Doing)

3.1 Introduction

This section covers the further information required to satisfy the ‘doing’ requirements of the Level 2 competency of the APC.

This section covers the following areas:

- the interrelationship between procurement, tendering and contract selection
- other factors that will influence the choice of construction contract; and
- explanation of the different types of construction contract that can be selected for use with the most commonly adopted procurement routes in the UK.

3.2 Procurement, tendering and contract selection

Professional consultants who are advising an employer on appropriate contract selection should appreciate that selection of an appropriate construction contract results from the choice of procurement route and those other factors described in Section 3.3. A contract should not be ‘pre-selected’ and then used to drive the choice of procurement route.

In addition, professional consultants should also have an appreciation of the differences between procurement, tendering and contract selection and how they interrelate.

Procurement is the overall process of obtaining goods and services from external sources (e.g. a contractor). This includes deciding the strategy on how those goods and services are to be acquired by reviewing the employer’s requirements (e.g. relating to time, cost, quality and responsibility for design) and their attitude to risk. The choice of an appropriate construction contract will flow from this analysis of the employer’s requirements and the chosen procurement route.

Tendering is an important phase in the overall procurement strategy. Tendering is the bidding process and the actual process of appointing a contractor.

3.3 Other factors influencing the choice of construction contract

The choice of procurement route will influence the choice of appropriate construction contract because certain construction contracts are designed for use with certain procurement routes. For example, the JCT’s Design and Build Contract is designed for use only where the design and build procurement route has been chosen.

The contract is not appropriate for another procurement route. Similarly, the JCT’s Standard Building Contract is designed for use where the traditional procurement route has been chosen and is not appropriate for another procurement route (e.g. design and build or construction management).

Therefore, the choice of procurement route will be a key influence on the choice of appropriate construction contract, but there are a number of other factors that need to be considered before finally deciding on the most appropriate contract for a particular project:

3.3.1 The types of works required and sector

The nature of the required works and the particular sector that the works relate to should influence the choice of construction contract.

In advising on appropriate contract selection, professional advisers need to consider the types of works that will be covered by the contract. For example, are the works building or engineering related? Is it a new building or the refurbishment or alteration of an existing building? Are there any areas of specialist design required? Are they major works or small works, perhaps ‘jobbing’ in nature? Are they one-off works, part of a pipeline of required works or maybe even part of a programme of works to an existing set of assets?

In addition, certain standard form construction contracts are designed for use in particular sectors of the construction industry. Certain sectors of the construction industry are also used to working with particular standard form construction contracts. For example, the commercial construction market in the UK is very familiar with the JCT suite of contracts, but less familiar with the NEC, FIDIC and ICC contracts. In contrast, the infrastructure and engineering markets are more familiar with the NEC and ICC contracts, but less so with JCT contracts and PPC2000. Therefore, imposing an unfamiliar form of construction contract on a particular sector may create additional and unnecessary risk, as either or both of the employer and contractor may not understand the balance of risk and their rights and obligations under a particular contract. Unfamiliarity with a contract may also lead contractors to price for risks (that may or may not exist) in their tender price.

Examples of the sectors in the UK that use particular forms of contract are as follows (although readers should note that these are indicative examples only and there may be good reasons why an employer could use a form of contract that is not ordinarily used in a particular sector):

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- **JCT contracts** – The mainstream construction sector procuring works such as new-build office blocks, office remodelling and refurbishments, hotels, new apartment blocks, fit-out of shops and office premises, accommodation projects, education projects, sports stadia and leisure facilities.
- **NEC contracts** – The engineering and infrastructure sectors procuring works such as new roads and upgrades to the existing road network, new rail lines and assets, nuclear facilities, the London 2012 Olympics, and water utilities.
- **GC Works contracts** – Although now experiencing a general decline in use, the GC Works contracts were previously used by central government and local authorities to procure a range of major building and civil engineering works, as well as more mainstream construction, e.g. new local authority office facilities. The use of GC Works contracts has declined as the public sector increasingly uses the NEC contracts and other collaborative forms of contract.
- **Infrastructure Conditions of Contract** – The engineering and infrastructure sectors procuring works such as new rail lines and assets, tunnelling, ports and docks, energy and water utilities.
- **IChemE contracts** – The process engineering sector procuring works such as process plants and manufacturing facilities, and also other sectors such as nuclear, pharmaceuticals, water and tunnelling.
- **FIDIC contracts** – These are not commonly used in the UK, but have found use in the oil and gas sectors, and onshore and offshore renewables sectors (e.g. offshore windfarm projects).
- **PPC2000 contracts** – Can be used in the mainstream construction sector, but have found particular use by local authorities (e.g. term maintenance arrangements for housing stocks), housing associations and some central government departments (e.g. the Ministry of Justice and Department for Work & Pensions).
- **CIOB's Contract for Use with Complex Projects** – It is intended for use by companies and public authorities in the UK and in any other country where works comprise complex building and/or engineering which cannot reasonably be expected to be managed intuitively. It can also be used with a variety of procurement methods (including build only, design and build, and turnkey).
- **LOGIC contracts** – These were developed for use in the offshore oil and gas sector in the UK. The contracts cover a variety of services and works including design, general construction and marine construction. With suitable adaptations, the LOGIC contracts have also been used for offshore windfarm projects.
- **IMechE/IET contracts** – These were developed specifically for electrical and mechanical work and consultancy, e.g. the design, construction and commissioning of anaerobic digestion plants or combined heat and power plants, and the design, installation and commissioning of complex automated systems in distribution warehouses.

Therefore, those who are advising an employer on contract selection will need to factor the nature of the works and particular sector into the decision on which contract is most appropriate for the particular project. Professional advisers should also familiarise themselves with which standard form construction contracts are most commonly used for particular works and in particular sectors.

3.3.2 Size, value and complexity of the project

The size, value and complexity of a particular project should also influence the choice of construction contract, although advisers should be aware that one does not necessarily affect the others. For example, a project could be large in scale and value but relatively simply to construct, e.g. the construction of the shell for a large manufacturing facility. Similarly, a project could be relatively low value and size but contain lots of complicated design and programming relationships.

As noted in Section 2, there is a large range of construction contracts available for use in the UK, but some of these are designed for higher value and more complex projects, whereas others are designed for lower value, simpler projects. Therefore, the employer and his professional advisers should choose a form of construction contract that is appropriate and proportionate to the size, value and complexity of the works. A simple, small value project does not necessarily need a lengthy and detailed construction contract. To cater for this, many of the major publishers of standard form construction contracts produce contracts that are appropriate for differing values and complexities of work. For example, the JCT produces the Standard Building Contract (suitable for large value projects where detailed contractual provisions are required), the Intermediate Building Contract and the Minor Works Building Contract.

In addition, the size, value and complexity of the works are also likely to determine the size and sophistication of the contractors who carry out those works. The larger and more sophisticated contractors will be attracted to large scale projects and would probably expect to contract on a lengthy and detailed construction contract. However, a smaller contractor working on a relatively small project would probably not expect to contract on a lengthy and detailed construction contract. The risk balance and number of administrative requirements placed on the contractor may not be proportionate to the value and complexity of the works they are undertaking.

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3.3.3 The employer and their level of sophistication and familiarity with construction

Private sector clients generally have a greater range of construction contracts from which to choose when compared to public sector clients. This is because, for non-PPP projects, the public sector is generally required to use the NEC3 suite of contracts for construction projects, although the JCT Constructing Excellence Contract and PPC2000 have also been endorsed for public sector use. For PPP projects, there may be other forms of contract (such as those for use with PF2 or the Priority Schools Building Programme) that the public sector has to use. Therefore, when working on public sector projects, there may be little or no choice as to which construction contract to use.

Similarly, quasi-governmental bodies, such as Network Rail and the Highways Agency also have their own preferred forms of contract that they use on all their projects. For example, Network Rail uses a suite of contracts that includes amended versions of the JCT and ICC contracts. The Highways Agency's contract of choice is the NEC3 ECC. Therefore, when dealing with certain organisations such as these, the choice of contract may already be pre-determined and there may be little or no scope for alternative terms.

The level of an employer's familiarity and comfort with a form of contract may play a part in driving the choice of contract for a particular project. For example, some employers in the mainstream commercial construction market may be very familiar with working with the JCT contracts, but less familiar with the NEC or ICC contracts. Similarly, an employer in the infrastructure market may be familiar with NEC or ICC contracts, but less so with the JCT contracts or the PPC2000.

In addition, some forms of construction contract are better suited to those employers who have a higher level of sophistication, familiarity with construction and administrative capability. For example, the JCT's Intermediate Building Contract and Minor Works Building Contract can be used by employers who are relatively unfamiliar with construction. The employer is able to rely on others (e.g. a contract administrator) to help administer the contract and the contractual procedures and administrative requirements are short enough that the parties to the contract should not be overwhelmed by them. In contrast, the JCT's Major Project Construction Contract, Management Building Contract and Construction Management Appointment are best suited to sophisticated employers who are used to procuring complex construction projects. These contracts demand that the employer has a higher level of administrative and decision making capability and is sophisticated enough to handle complex contractual relationships with multiple parties. Such employers are thus able to take on greater obligations and take more risk on a particular project.

Therefore, those advising an employer on contract selection need to consider the level of risk and obligations that the employer is able to bear, and choose an appropriate contract accordingly. They also need to bear in mind the employer's familiarity and comfort with certain contracts and consider whether the advantages of using a different type of contract for a particular project outweigh any disadvantages. This should all be discussed with the employer.

3.3.4 Balance of risk/risk allocation

The choice of procurement route also has a major bearing on the balance of risk within a project and the chosen construction contract. This is because certain procurement routes place inherently more risk on the contractor than the employer, whereas other procurement routes are riskier for the employer. For example, design and build contracting is considered to be far riskier for the contractor, whereas a Management Contract is considered far riskier for the employer.

In addition, even between those contracts that are designed for use with the same procurement route there can be a great deal of divergence between the risk allocation on the parties. For example, the design and build procurement route generally places responsibility for the design and construction of a project with the contractor. There are also a number of standard form construction contracts that have been designed for use with this procurement route. However, the exact level of design and construction responsibility placed on the contractor will vary between those contracts, depending on their terms and conditions.

The various procurement routes also differ in other areas such as (i) the employer's relative level of involvement, (ii) the separation of design from management and construction, (iii) the speed from inception to completion, and (iv) certainty of price. These will all have an impact on the terms and conditions and risk allocation that are present within standard form construction contracts that are designed for use with particular procurement routes.

Therefore, those advising an employer on contract selection need to appreciate the different balances of risk that are present within the standard form construction contracts and how these relate to the procurement route that has been chosen.

3.3.5 Design responsibility

Another major influence on the choice of contract is which party will have predominant responsibility for design. While this will also be driven by the choice of procurement route, employers and their professional advisers will need to consider exactly which parts of the works should be designed by which party.

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For example, the employer may retain responsibility for the design of most of the works, but may wish the contractor to take responsibility for the design of certain parts of the works (e.g. certain mechanical and electrical works). Similarly, if significant design input is required from specialist sub-contractors and suppliers, the choice of contract will need to facilitate this and give the parties sufficient control over what is being designed by the supply chain.

Therefore, the choice of contract will need to allow for this allocation of design responsibility. Some forms of contract work with a wide range of design responsibilities (the NEC3 ECC and the CIOB's Contract for Use with Complex Projects), whereas others have been developed for use with specific allocations of design responsibility (e.g. the JCT's Standard Building Contract and Design and Build Contract).

3.3.6 Basis of the contract sum and payment

The basis of the contract sum and method of paying the contractor will be another major influence on the choice of construction contract.

As noted previously, there are various possible arrangements for calculating the contract sum under a construction contract. These include fixed price lump-sum arrangements, re-measurement arrangements and target cost arrangements. The contractor could also be paid on a prime cost basis plus a management fee.

Although the basis of calculating the contract sum will, to a large extent be driven by the choice of procurement route, there are still some choices that employers could be required to make. For example, an employer may choose to use the traditional procurement route for a new manufacturing facility. If the employer retains responsibility for most of the design of the project, they may wish to use a JCT 2011 Standard Building Contract (possibly with a Contractor's Designed Portion). The employer would then have to choose whether to pay the contractor on a fixed price lump-sum basis (in which case the 'with Quantities' or 'without Quantities' versions of the JCT 2011 Standard Building Contract should be used), or on a re-measurement basis (in which case the 'with Approximate Quantities' version of the JCT 2011 Standard Building Contract should be used). In contrast, the NEC3 ECC is a very flexible contract and contains six different options for calculating the contract sum. These include fixed price lump-sum and target cost options.

Therefore, professional advisers will need to consider the chosen procurement route and the preferred basis for calculating the contract sum when advising on appropriate contract selection.

The actual timing and method of paying the contractor will also need evaluating. Some contracts enable payment by way of interim valuations, milestone or stage payments, whereas others are less flexible. The manner and timing of payments will often be a matter for commercial negotiation between the parties, but professional advisers should ensure that the chosen construction contract can accommodate what has been agreed by the parties.

3.3.7 Control over sub-contractors

The employer's ability to exert control over the choice of sub-contractors may also influence the choice of construction contract. Certain contracts allow greater control over the selection of sub-contractors than others. Professional advisers will need to discuss the extent to which the employer requires any control over sub-contracting and the most appropriate manner of reflecting this in the chosen contract.

A 'domestic' sub-contractor is one in whose selection and appointment the employer generally plays no part, although the employer may be required to give consent to the appointment where specified in a particular contract. As such, because the appointment of such sub-contractors is generally purely a matter for the contractor, these are considered 'domestic' issues. In any event, if the contract between employer and contractor does contain provisions on sub-contracting, these are usually restricted to clauses that are designed to protect the employer's interests, e.g. termination, ownership of materials brought on to site, insurances and collateral warranties.

In contrast, the use of 'nominated' sub-contractors is increasingly rare. A nominated sub-contractor is one who is selected by the employer, but who then enters a sub-contract with the contractor. However, the employer remains responsible for certain aspects of the nominated sub-contractor's performance even though the contractor has an overarching obligation to carry out and complete the works.

Most of the standard form construction contracts in the UK market contain provisions regarding domestic sub-contractors, for example, see clauses 3.8 and 3.9 of the JCT 2011 Standard Building Contract and clause 26 of the NEC3 ECC. However, few contracts now provide for nominated sub-contractors. The ICC Measurement Version and the new Consultative Draft of the Infrastructure Conditions of Contract do permit nominated sub-contracting (as well as domestic sub-contracting), and the JCT 2011 JCT Design and Build Intermediate Building Contract provide for 'named sub-contractors', but otherwise true nomination is rare.

Overall, control over sub-contractors should probably not be one of the primary reasons for choosing a particular contract, although it is one of the issues that should be considered. If the employer wishes to use a particular contract but the sub-contracting provisions do not provide sufficient control, it is always possible to amend a contract to reflect the employer's wishes. However, as noted elsewhere, legal advice should be sought when making amendments to contractual terms.

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3.4 Construction contracts for use with the most commonly adopted UK procurement routes

The previous sections have reviewed the different procurement routes commonly used in the UK construction market, the main publishers of standard form construction contracts and the contracts themselves. This section considers the various standard form construction contracts for the appointment of a contractor by the employer, which are available for use with the various procurement routes. The decision making process should also take into account those factors detailed in Section 3.3.

Note that the following contracts are **standard form construction contracts**. It is also possible to create bespoke contracts for each of the procurement routes detailed below, but legal advice should be sought before doing so.

Also note that this section only details the most well known and commonly used standard form construction contracts. Other standard form construction contracts may be available for each of the procurement routes detailed.

Some contracts are listed under a number of headings as they are versatile enough to be used in a number of different ways and with different procurement routes.

Traditional (lump sum)

Where a project is procured on a traditional (lump sum) basis the following contracts are available for use:

- JCT Standard Building Contract 2011 (the 'with Quantities' and 'without Quantities' versions)
- JCT Intermediate Building Contract 2011
- JCT Minor Works Building Contract 2011
- NEC3 ECC Option A
- ICC Minor Works Version 2011
- GC/Works/1 Building & Civil Engineering Major Works with Quantities (1998)
- GC/Works/1 Building & Civil Engineering Major Works without Quantities (1998)
- GC/Works/2 Building & Civil Engineering Minor Works (1998)
- GC/Works/3 Mechanical & Electrical Engineering Works (1998)
- GC/Works/4 Building, Civil Engineering, Mechanical & Electrical Engineering Small Works (1998); and
- CIOB's Contract for Use with Complex Projects (2013).

Traditional ('re-measurement' or 'measure and value')

Where a project is procured on a traditional ('re-measurement' or 'measure and value') basis, the following contracts are available for use:

- JCT Standard Building Contract 2011 (the 'with Approximate Quantities' version)
- JCT Measured Term Contract 2011
- NEC3 ECC Option B
- FIDIC Red Book
- FIDIC Pink Book
- ICC Measurement Version 2011
- ICC Minor Works Version 2011; and
- ICC Ground Investigation Version 2011.

Design and build

Where a project is procured on a design and build basis the following contracts are available for use:

- JCT Design and Build Contract 2011
- JCT Major Project Construction Contract 2011
- NEC3 ECC Options A–E
- ICC Design and Construct Version 2011
- GC/Works/1 Single Stage Design and Build (1998)
- GC/Works/1 Two Stage Design and Build (1999)
- IChemE Red Book 2013
- IChemE Green Book 2013
- IChemE Burgundy Book 2013
- FIDIC Yellow Book
- CIOB's Contract for use with Complex Projects (2013); and
- MF/1 (Revision 6) (2014 edition).

Construction management

Where a project is procured on a construction management basis the following contracts are available for use:

- JCT Construction Management Appointment 2011
- NEC3 ECC Option F; and
- GC/Works/1 Construction Management Trade Contract (1999).

Management contracting

Where a project is procured on a management contracting basis the following contracts are available for use:

- JCT Management Building Contract 2011; and
- NEC3 ECC Option F.

Partnering

Where a project is procured on a partnering basis, the following contracts are available for use:

- PPC2000 (2013 edition)
- TPC2005
- NEC3 ECC with secondary Option X12
- JCT – Constructing Excellence Contract 2011
- JCT Non-Binding Partnering Charter; and
- ICC Partnering Addendum.

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Public private partnerships

The types of contracts available where parties are entering into a Public Private Partnership are numerous and diverse. Depending on the nature of the project, a central government department or local authority may choose to use one of the standard form construction contracts, a bespoke contract, or one of the contracts produced by central government (e.g. for PF2 or the Priority Schools Building Programme).

Wider discussion around the nature of public sector contracting is outside the scope of this guidance note.

Others

(i) Cost plus/cost reimbursable/prime cost

Where a project is procured on a cost plus/cost reimbursable/prime cost basis, the following contracts are available for use:

- IChemE Green Book 2013
- JCT Prime Cost Contract 2011; and
- NEC3 ECC Option E.

(ii) Target cost

Where a project is procured on a target cost basis the following contracts are available for use:

- NEC3 ECC Options C and D
- IChemE Burgundy Book 2013; and
- ICC Target Cost Version.

(iii) Term contracting

Where a series of projects is procured on a 'term' basis, the following contracts are available for use:

- JCT Measured Term Contract 2011
- NEC3 Term Service Contract
- TPC2005
- ICC Term Version 2011
- GC/Works/6 Dayworks Term Contract (1999)
- GC/Works/7 Measured Term Contract (1999)
- GC/Works/8 Specialist Term Contract for Maintenance of Equipment (1999)
- GC/Works/9 Lump Sum Term Contract for Operation, Maintenance and Repair of M&E Plant, Equipment and Installations (1999); and
- GC/Works/11 Minor Works Term Contract.

(iv) Framework agreements

Where a series of projects is procured on a framework basis, the following contracts are available for use:

- JCT Framework Agreement 2011; and
- NEC3 Framework Agreement.

(v) Alliancing

At the time of writing this guidance note, there is no standard form construction contract that is used where a project is procured on an alliancing basis. Although alliancing is becoming more popular in the UK (for example in the utilities, rail and oil and gas sectors), each sector and employer tends to have its own bespoke form of alliancing contract that it will use to procure projects.

(vi) EPC

Where a project is procured on an Engineering, Procurement and Construction (EPC) basis, the following contracts are available for use:

- FIDIC Yellow Book; and
- FIDIC Silver Book.

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4 Practical considerations [Level 3 – Doing/Advising]

4.1 Introduction

This section covers the further information required to satisfy the ‘doing/advising’ requirements of the Level 3 competency of the APC.

Once an appropriate contract has been selected, the contractual requirements have been negotiated and agreed and the tendering process has been completed, the parties will be ready to execute (i.e. sign) the contract documents. Those professional consultants who assist in the collation of the contract documents and execution process need to be aware of the basic elements that are required to create a contract and the practical issues of agreeing and executing a contract.

Therefore, this section covers the following areas:

- essential elements required to create a contract
- understanding the contract documents and pitfalls to avoid when compiling a contract for execution
- amending standard form construction contracts and how to incorporate schedules of amendments, including why standard form construction contracts are amended
- executing a contract and duration of liability; and
- the jurisdiction in which the works are located.

4.2 Essential elements required to create a contract

A contract is a legally enforceable agreement which gives rise to various rights and obligations for the parties to the contract. A contract is formed when the following key elements coincide:

- offer
- acceptance
- consideration
- certainty of terms; and
- intention to create legal relations.

Only once all these elements are in place will a contract arise. However, it is not uncommon to see a formal contract document signed months or even years after the commencement of a project. Even if a formal contract is signed by the parties, it is quite often just regarded as a record of a state of affairs that already exists.

Professional advisers should be aware that a contract can come into existence in many ways. A contract does not necessarily have to be made in writing. It can be made orally, or by email, or via the internet. As long as the key elements for contract formation have been met, then a contract can come into effect.

This also has greater implications in the construction industry because following the repeal of section 107, the *Housing Grants, Construction and Regeneration Act 1996* (as amended) now applies to construction contracts that are created in any form (not just those in writing). Therefore, the payment, suspension for non-payment, and adjudication provisions in all construction contracts must comply with the requirements of the *Housing Grants, Construction and Regeneration Act 1996* (as amended). If they do not, terms from the *Scheme for Construction Contracts (England and Wales) Regulations 1998* (as amended) will be implied into the contract to fill the gap. Equivalent secondary legislation also exists in Scotland.

Therefore, as a matter of good practice, parties should seek to enter into a formal contract as soon as is practical. Failing to do so could result in further rounds of negotiations and even eventual failure by the parties to understand just what it is they have each agreed to do. Conversely, the parties involved in the negotiation process should be careful not to bind themselves inadvertently to a contract at a time when they only intend to reach an understanding on the scope of the works by agreeing preliminary matters. The parties should be careful to avoid making an enforceable contract accidentally and prematurely.

4.2.1 The offer

An offer is a proposal or promise by one party (often known as the ‘offeror’) to enter into a contract, on a particular set of terms, with the intention of being bound as soon as the party to whom the offer is made (often known as the ‘offeree’) signifies his/her acceptance. Therefore, an offer must contain the basic terms of the agreement and evidence an intention that no further bargaining is to take place.

In the context of the construction industry, a contractor’s tender for a particular project could be considered as an offer. The contractor’s tender is made in response to an invitation to tender sent by the employer to a number of different contractors. The invitation to tender is not considered to be an offer itself. Instead, it is known as an invitation to make an offer or an ‘invitation to treat’.

An offer is generally revocable and can be terminated in a number of ways. For example, an offer may be terminated by the lapse of a certain period of time (e.g. a contractor’s tender may state that it is open for 28 days after which it will lapse), or after a reasonable period of time has passed. Offers can also be terminated if withdrawn by the offeror before they are accepted or rejected by the offeree.

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4.2.2 The acceptance

Acceptance is the final and unqualified assent to an offer. It is made in response to an offer and to be effective in creating an enforceable contract, it must correspond exactly with the terms of the offer with no variation of the terms.

It is generally the case that acceptance must be communicated to the offeror to be effective, although sometimes conduct will be considered acceptance (for example, where a supplier does not communicate acceptance of an order, but it delivers the goods ordered and requests payment). However, conduct will only amount to acceptance of an offer if it is clear that the party did the act in question with the intention of accepting the offer.

A purported acceptance which attempts to introduce new terms, or vary those contained in the offer, will be regarded as a counter-offer (which will itself be capable of acceptance) and not as acceptance of the original offer.

As a result of the offer/counter-offer process, one consequence often encountered in the construction industry is a 'battle of the forms'. This occurs during the negotiation of contracts between the parties, each of whom wants its own standard terms and conditions to be incorporated into the contract. However, this is more likely to occur in a contractor/sub-contractor or contractor/supplier relationship rather than an employer/contractor relationship. In trying to work out which party's terms and conditions apply, courts will often look to see 'who fired the last shot', but every case will depend on its particular facts and the correspondence between the parties.

4.2.3 Consideration

As a general rule, a promise is only enforceable where it is made in the form of a deed, or the party seeking to enforce it has given some 'consideration' (i.e. something of value) in return for the promise. The law does not enforce a gratuitous promise, e.g. the promise of a gift.

In the context of a construction project carried out on the basis of a standard form construction contract, the consideration from both parties should be relatively easy to ascertain, i.e. the contractor agrees to carry out a particular scope of work and in return the employer agrees to pay the contractor. However, as the project develops or if additional contracts are required, there may be occasions where the consideration is less easy to define. Professional advisers should be aware of this when seeking to conclude additional contracts or when seeking to incentivise a party to carry out an existing obligation.

4.2.4 Certainty of terms

For a binding contract to exist, and to be enforced, the terms must be certain. Parties must ensure that their agreement is complete (i.e. not lacking in some essential term) and that their agreement is not otherwise uncertain (e.g. vague or ambiguous). If an agreement is incomplete or otherwise uncertain, a court may not be able to enforce it.

In the context of a construction contract, the essential terms are generally considered to be the 'what' (i.e. scope of work), 'when' (i.e. the time for performance) and 'how much' (i.e. the contract sum). If agreement has not been reached on these elements or if the contract records these elements in an ambiguous or vague manner, it could be found that the contract lacks sufficient certainty to be binding.

Therefore, professional consultants should ensure that a contract is drafted clearly and unambiguously, incorporating all the essential terms that have been agreed.

4.2.5 Intention to create legal relations

A contract cannot be made without a mutual intention to create a legally binding arrangement. Where no such intention can be attributed to the parties, there is no contract. However, in commercial circumstances there is a rebuttable presumption that the parties intend their agreement to be legally binding. If a party wishes to rebut this presumption, it will have to produce clear evidence to that effect.

This can have an effect during contract negotiations. The parties may hope to enter into legal relations at a particular point in the future (e.g. once all essential terms have been agreed), but either or both of the parties may not wish to enter into legal relations any earlier than that (e.g. because there are outstanding matters to be agreed). In these circumstances, the relevant party will need to be clear that it does not wish to enter into legal relations at that earlier point in time.

The words 'subject to contract' are commonly used to evidence an intention not to enter into legal relations at a particular point in time. The relevant party can use these words, or any other way of expressing the same sentiment, until it is actually ready to enter into legal relations.

4.3 The contract documents

Once agreement has been reached between the parties on terms of the contract and they wish to enter into a contract, the contract needs to be created and collated and made ready for execution (signature) by the parties. This job is often done by one of the employer's professional consultants such as the architect/contractor administrator, employer's representative or quantity surveyor. In order to create and collate the contract for execution, the professional consultant needs to be familiar with how to fill in any project-specific parts of the contract (e.g. the Contract Particulars in the JCT Contracts and the Contract Data in the NEC Contracts) and also which other contract documents go into forming the contract.

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As an example, under the JCT Standard Building Contract with Quantities, the following actions are needed as a minimum:

- Completion of all the information in the Articles of Agreement (e.g. inserting the details of the employer and the contractor, filling in the Recitals and Articles, filling in Parts 1 and 2 of the Contract Particulars, and inserting the relevant information on the execution (signature) pages.
- Collating all the contract documents and putting them together in a bound pack (i.e. the contract drawings, the contract bills, the Articles of Agreement and conditions of contract, together with (if there is a Contractor's Designed Portion) the Employer's Requirements, the contractor's proposals and the CDP analysis).
- If any amendments to the terms and conditions have been agreed, these will need to be reflected in the contract. See Section 4.4 for discussion on how this can be achieved.

As a further example, under the NEC3 Engineering and Construction Contract Option C, the following actions are needed as a minimum:

- Producing a form of agreement for the parties to sign. This is needed because the NEC3 ECC Option C does not contain an area where the parties can sign the contract. A separate form of agreement is required for this purpose. A bespoke form of agreement can be produced, or the NEC produces a template form of agreement that can be used for this purpose.
- Completion of all the information in the Contract Data Part 1 (data provided by the employer) and the Contract Data Part 2 (data provided by the contractor).
- Producing the activity schedule (this is needed for the NEC3 ECC Option C).
- Producing the Works Information. The Works Information should be in two parts: Works Information provided by the employer and Works Information provided by the contractor. The Works Information is a critical document and there are many references to it throughout the NEC3 ECC Option C. The professional consultant needs to ensure that the Works Information contains appropriate information for each of these contractual references. The NEC produces a guidance note (titled 'How to write the ECC Works Information') which provides comprehensive guidance.
- Producing the Site Information. There are a number of references to the Site Information throughout the NEC3 ECC Option C. The professional consultant needs to ensure that the Site Information contains appropriate information for each of these contractual references.
- Collating all the above contract documents and putting them together in a bound pack.

- If any amendments to the terms and conditions have been agreed, secondary Option Z should be selected. This should be noted in the Contract Data Part 1, which should also identify which document the 'Z clauses' are contained in.

In producing and collating the contract documents, the professional consultant should note that a 'less is more' approach pays dividends. Often contracts are produced that have lots of pre-contract correspondence (e.g. emails) included within them or additional documents that are not referred to in the terms and conditions. Doing this runs the risk of creating uncertainty, ambiguity, a lack of clarity and inconsistency between the terms and conditions and other contract documents. Therefore, the professional consultant should carefully consider which documents are to be included in the contract.

The contract documents, such as those that detail the scope of work, should also be written using the same language and terminology as the contractual terms and conditions. For example, if the terms and conditions use the phrases 'employer', 'contractor' and 'sub-contractor', these phrases should also be used in the other contract documents. It could cause confusion if other terminology is used (such as 'client', 'main contractor' and 'specialist').

The professional consultant should also agree with the employer how many copies of the contract documents will be produced. It is common to create two or even three copies of the contract documents. That way, each party to the contract will have their own copy and a further copy could also be kept on site.

4.4 Amending a standard form construction contract

Standard form construction contracts are generally drafted in a balanced manner, reflecting the views of different parties to a construction project (e.g. employers, contractors and consultants). The contracts are drafted so that risks are borne by the party best able to manage those risks. As such, it is entirely possible for parties to use standard form construction contracts on an unamended basis. If they wanted to, they could negotiate and agree the project specific requirements (e.g. the scope of work, programme and contract sum), insert these into the Contract Particulars, append the relevant contract documents, sign the contract and start work.

However, it is common within the construction industry to amend the terms and conditions contained within a standard form construction contract. These amendments are generally driven by employers, and then flow down from the contractor to his sub-contractors and the supply chain. Many employers and their professional consultants (particularly the larger ones) have their own pre-prepared amendments to the standard form construction contracts which they generally use on all their projects. Other employers may create a set of amendments specifically for a particular project. Professional consultants advising

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employers on their contracts need to know why standard form construction contracts are amended and the most appropriate means of amending these contracts. Amendments to standard form construction contracts should only be drafted by legally qualified professional advisers.

Standard form construction contracts may be amended for a number of reasons. These include the following:

4.4.1 Altering the risk allocation in a contract

As noted in section 4.4, the standard form construction contracts are generally drafted in a balanced manner, with risks allocated to the party best able to manage those risks. For example, a standard form construction contract will generally include a list of events that entitle the contractor to claim additional time and/or money for carrying out the works. These are typically events that the contractor does not have any control over (i.e. the contractor cannot manage those risks) and so the contractor is entitled to claim additional time and/or money if one of those risks materialises.

However, when a standard form construction contract is amended, this is often done in order to alter the allocation of risk within that contract. Risk is generally moved away from the employer and transferred to the contractor. This can be done in a number of ways. For example, the list of events that entitle the contractor to claim additional time and/or money could be reduced. This would result in the contractor bearing the risk of any delays to the project or cost overruns if any of those deleted events arose.

Other amendments may seek to lengthen the final date for payment of sums due to the contractor, or may specifically place the risk on the contractor if any adverse site/ground conditions occur. In design and build contracting, it is common to see amendments (e.g. to the JCT Design and Build Contract) that make the contractor responsible for the design of the entirety of the project, including any design that was carried out by the employer's design team and included in the employer's requirements.

4.4.2 Inserting additional obligations

Standard form construction contracts are also typically amended by inserting additional contractual obligations. For example, a contract can be amended by inserting a requirement for the contractor to provide certain bonds, guarantees and collateral warranties at a particular point in time. This is often backed up by additional remedies for the employer if the contractor fails to comply with these obligations. Other amendments may require the contractor to keep the employer more informed about the contractor's programme for the works, or could require the contractor to comply with any administrative requirements of the employer.

4.4.3 Removing rights

Other amendments may seek to remove certain rights or insert additional requirements before a right can be claimed. For example, if a contractor is claiming an extension of time and/or payment of additional sums, a contract may be amended so that the contractor loses his right to claim these entitlements if he fails to provide a notice to the employer within a particular time. Other amendments may seek to reduce the contractor's entitlement to object to a proposed variation to the works.

4.4.4 Project-specific requirements

The requirements of a particular project or site may necessitate amendments to a contract. For example, there may be a particular risk or hazard affecting a project (e.g. the possibility of contamination coming onto the site from a third party's land) that needs to be addressed in a contract and a project-specific amendment is required. Alternatively, the parties may agree that one of them is required to obtain a specific consent relating to the works and the consequences that may follow if that consent is not obtained. Again, this project-specific requirement may need to be reflected in a contract amendment. As a further example, the parties may agree that a particular stage of the works cannot proceed until the employer has the required funding in place. The contract may need amending to introduce a 'hold point' beyond which the works cannot proceed until the employer has given notice.

Therefore, the employer and professional advisers need to carefully review the nature of the project and consider if any specific amendments are needed to the chosen contract. Legal advice should be sought on the best means of effecting any required project-specific amendments to a contract.

As can be seen, there are a number of reasons why an employer may wish to amend a standard form construction contract. But those who are advising on these matters will need to consider both the purpose of a particular amendment and the likely affect that it will have on the contractor and the overall project. Professional advisers should consider whether a contractor would be likely to increase their tender price as a result of having to take on more risk. Is this an acceptable trade-off for moving the risk to the contractor? How else might the contractor alter his behaviour as a result of taking on more risk? Does this represent best value for the employer and the project?

Amendments to standard form construction contracts should also be proportionate to the parties and the size, value and complexity of the project. A 30-page schedule of amendments to a 'minor works' contract may not be proportionate relative to the sophistication of the parties and the nature of the project. Professional consultants should therefore carefully consider why a standard form construction contract may need amending and then, if required, insert amendments that are proportionate and best value for the employer and the overall project.

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Professional consultants should also appreciate that the contractual provisions within standard form construction contracts are generally interlinked. Although there may not be any specific cross-references that highlight areas of connection, if certain parts of a contract are amended then this generally has a knock-on consequence elsewhere in the contract. For example, amending a JCT Design and Build Contract so that the contractor takes full responsibility for any design carried out by the employer's design consultants and contained in the employer's requirements requires a number of amendments throughout the contract. It is not done in just one place. Therefore, those professional consultants who advise on and prepare amendments to contracts need to be aware of these interrelationships so that amendments do not cause conflict or create uncertainty or ambiguity within a contract.

Any amendments to a contract should also be made in the same language, style and terminology of the underlying contract. For example, the NEC3 contracts are written in the present tense so any amendments to an NEC3 contract should also be written in the present tense and use the same language, style and terminology as the underlying contract.

Once any amendments to a contract have been agreed between the employer and the contractor, a professional consultant may be required to advise on the most appropriate way to incorporate those amendments into the contract.

If there are few amendments and they are relatively short, the standard form construction contract itself can be physically amended. Any necessary deletions can be made by striking through the relevant provisions. Any necessary additions can be made by writing the required amendment onto the contract or attaching additional sheets of paper containing the required amendment. All the deletions and additions should then be initialled by all the parties to the contract to signify their acceptance of the amendments.

Alternatively, if there are many amendments and/or the amendments are lengthy, a separate document can be prepared that shows all the agreed amendments to the standard form construction contract. Those professional consultants who are responsible for preparing the contract for signature should ensure that this schedule of amendments is specifically included in the list of contract documents (see Section 4.3) and also takes priority over the terms and conditions in the underlying contract. If a professional consultant has any doubt about how to achieve this, legal advice should be sought.

4.5 Executing a contract and duration of liability

4.5.1 England and Wales

Deeds and simple agreements

In England and Wales, one of the final stages in creating a contract is to ascertain whether the parties will execute (i.e. sign) the contract as a deed or as a simple contract. In the context of a construction project, the principal difference between the two relates to how long the parties will be liable for any breaches of contract.

A contract that is signed as a deed will have a 12 year liability period (as provided for under the *Interpretation Act 1978*). A contract that is signed as a simple agreement will have a six year liability period. In addition, for historical reasons, a contract that is executed as a deed does not have to contain any 'consideration' (see Section 4.2.3). However, in the context of a construction contract where one party agrees to carry out works in return for payment, consideration would be present anyway.

If a contract is to be valid as a deed, there are four key requirements:

- a deed must be in writing
- it must be clear from the face of the contract that it is intended to take effect as a deed (this is known as the 'face value requirement')
- the contract must be validly executed as a deed; and
- a deed must be delivered.

Since a simple contract can come into effect orally, there is no requirement for a simple contract to be signed. But, if a contract is to take effect as a simple agreement, it is still good practice for both parties to execute the contract. This helps signify both parties' acceptance to the terms of the contracts and may help to prevent any future disagreement about what the terms of the contract are.

Executing a contract

As long as all the elements required to create a contract are present (see Section 4.2) a contract can come into effect, whether or not a formal contractual document is signed. However, it is strongly recommended that employers and contractors do enter into formal contractual documents in order to signify both parties' acceptance to the terms of the contracts and it may help to prevent any future disagreement about what the terms of the contract are.

Once it has been agreed whether the contract is to be executed as a deed or as a simple contract and the contract is ready for execution, it is good practice to ascertain who will execute the contract on behalf of each party. It is also good practice to ascertain whether those persons have the necessary authority to execute contracts on behalf of the relevant party. For example, if a person has been granted a Power of Attorney to execute a contract on behalf of a particular party, it is good practice

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to obtain a copy of that Power of Attorney and also a copy of any relevant board minutes evidencing the decision to grant the Power of Attorney.

There are many different types of organisations which may enter into construction contracts (e.g. private companies, limited liability partnerships, individual persons, and industrial and provident societies). Each of these organisations will have their own rules regarding who executes contracts on their behalf and how contracts are executed. If there is any doubt, it is good practice to seek confirmation of who is permitted to execute contracts on a party's behalf and also seek confirmation on the preferred method of execution by each party. The execution wording in the contract should be drafted to reflect these requirements.

4.5.2 Scotland

In one sense, matters are more straightforward in Scotland. Building contracts and professional appointments are entered into as contracts – the distinction between simple agreements and deeds is not a feature of Scottish law in the same way as it is in England and Wales. There are, however, some key points to understand regarding execution of contracts in Scotland – in particular the duration of the parties' liability and the manner of execution.

Duration of liability – prescriptive periods

The *Prescription and Limitation (Scotland) Act 1973* (as amended) (the '1973 Act') provides, among other things, for contractual rights and obligations to be extinguished after a specified period of time (known as a 'negative prescription').

(i) Short negative prescription

The 'standard' prescriptive period in Scotland (known as 'short negative prescription') is a period of five years.

If an obligation subsists for a continuous period of five years without any relevant claim being made in respect of that obligation, or without a relevant acknowledgment being made of the existence of that obligation, then that obligation is extinguished. If such a claim or acknowledgment is made, then the prescriptive period is interrupted and the obligation continues to exist until a further, uninterrupted five year period has elapsed.

Generally, the five year period starts to run on the date on which the obligation became enforceable. For breach of contract situations, this is the date when loss, injury or damage occurred. However, in cases where breach constitutes a continuing process, e.g. where building works disturb another part of a building, the period does not start until the end of the process. In addition, where the damage is latent, the five year period does not start to run until the person owed the duty is aware or by using reasonable diligence, should have become aware of the harm.

(ii) Long negative prescription

Given the above, in a latent defects scenario the five year 'window' would continually be extended. The law then steps in to provide a 'longstop' date on liability through the operation of what is known as 'long negative prescription'.

If, after the date when any obligation becomes enforceable, 20 years has passed without any claim being made and without the subsistence of the obligation being acknowledged, then the obligation is extinguished.

Unlike the five year short negative prescription, there is no 'discoverability' element to long negative prescription. Therefore, it does not matter that the person relying on the right was not aware of the loss that he suffered or, whether or not he ought to have been so aware. The 20 year period will start running from the date the loss actually occurred, which is a question of fact.

(iii) Time periods

The 1973 Act states that parties to a contract are not permitted to 'contract out' of the negative prescriptions, whether long or short. It is generally considered that this would prevent the parties extending these five and 20 year periods, but not shortening them. Therefore Scottish building contracts and professional appointments usually have time limitation clauses.

Twelve years is the standard period included in construction contracts in Scotland and this is typically because there is a lot of commercial sense and expectation that time periods would be the same whether contracting in Scotland or England and Wales.

Executing a contract in Scotland

Similar to England, it is generally possible to constitute a contract orally. However it is good practice to arrange for the parties' rights and obligations to be captured in writing and have that executed by them. This signifies their acceptance to the terms of the contract and helps to minimise any future disagreement about what the terms are.

The *Requirements of Writing (Scotland) Act 1995* (the '1995 Act') governs the execution of written contracts under Scottish law. The requirements are detailed but, in summary, to validly execute a contract parties are required to sign the document at the end of the final page (excluding schedules and annexes, etc.) and note their full name.

The 1995 Act also provides for 'self-proving' execution. This means that if certain formal requirements are met then the document is legally presumed to have been signed by those parties (unless the contrary can be proven). The requirements for self-proving execution vary depending on who the parties are, but a contract will be taken at face value regarding the executing parties, date and place of signing if, for example:

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- where the party is a natural person, the contract is signed by that person and a witness (note that witnesses need to provide both their name and address)
- where the party is a company, the contract is either signed by two directors, two authorised signatories or a director and company secretary (or one of the above with a witness)
- where the party is a partnership, the contract is signed by a partner or authorised signatory and a witness; or
- where the party is a limited liability partnership, the contract is signed by two members or a member and a witness;

and the contract also notes the place and date of execution by each party. Note that the same advice applies in Scotland regarding steps to be taken to verify the authority of each of the people noted above.

Counterpart execution in Scotland

While it is relatively common to see agreements executed in England and Wales by counterpart (i.e. each party executes their own copy of the contract, which are then taken collectively to bind them), in Scotland execution must take place on the same document.

However, in 2013, the Scottish Law Commission drafted a bill to allow for counterpart execution. At the time of writing this guidance note, the bill is being considered by the Scottish ministers but it has not yet been introduced to the Scottish Parliament. The Scottish government has made a commitment to introduce the bill with a view to it becoming law by the end of 2014.

4.6 The jurisdiction in which the works are located

Those advising on appropriate contract selection need to ensure that the choice of contract and the actual conditions of contract are appropriate for the jurisdiction in which the works are located and the governing law of the contract. This is because there are variances in the law between England, Wales, Scotland and Northern Ireland. The chosen contract needs to reflect those variations. Professional advisers need to be aware of which contracts are available for use in different jurisdictions and the types of amendment that are required in order for a contract to be consistent with the law in a particular jurisdiction.

For example, the JCT contracts are drafted primarily for use in England and Wales. If a project is based in Scotland and the employer wants Scottish law to apply to the contract, then professional advisers should be aware that the Scottish Building Contract Committee Limited publishes JCT contracts that are amended to reflect the law in Scotland. Similarly, if a project is based in Northern Ireland, the Royal Society of Ulster Architects publishes Adaptation Schedules for certain JCT contracts, to bring them into line with the law in Northern Ireland.

Other forms of contract also have certain country-specific amendments. For example, there is a Scottish Supplement for the PPC2000 contract that introduces contractual amendments for use in Scotland. However, at the time of writing this guidance note, there is no Northern Irish supplement for that contract and the other contracts in the PPC2000 suite are also not provided with any template Scottish or Northern Irish amendments. Therefore, these would need to be produced on a bespoke basis for projects in these jurisdictions.

The NEC contracts have options, W2 and Y(UK)2 that should be selected where the *Housing Grants, Construction and Regeneration Act 1996* (as amended) applies to a particular contract. Option Y(UK)3 is used where parties wish to use the *Contracts (Rights of Third Parties) Act 1999* to confer rights on a third party to enforce a term of the contract. Otherwise, Option Y(UK)3 can be used to confirm that no third party has such rights to enforce a term of the contract. However, readers should be aware that the *Contracts (Rights of Third Parties) Act 1999* does not apply in Scotland (which has a different method of conferring third party rights) and so specific legal advice should be sought on how to manage these issues within a contract.

The ICC contracts, e.g. the Measurement Version, have been written for use in England and Wales. However, each of the ICC contracts details how they are to be construed, operated and interpreted if the works are situated in Scotland or Northern Ireland. Further amendment to specific legislative references in the contract may also be needed. In contrast, because the ACE and CECA would like the revised Infrastructure Conditions of Contract to be capable of use both in the UK and overseas, the Consultative Draft of the revised Infrastructure Conditions of Contract does not pre-determine the governing law of the contract. This is to be stated in the Appendix to the contract.

Other forms of contract may be drafted on a more generic basis for wider use, or may make specific reference to particular pieces of legislation. For example, the FIDIC, IChemE, IMechE and CIOB could all need amending depending on the location of the works. Therefore, professional advisers should take note of the particular jurisdiction that a project is to be carried out in, and ensure that the chosen contract and its terms are consistent with the law of that particular jurisdiction. Specific legal advice should be sought if the professional adviser is in any doubt.

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Appendix – Contract comparison

This Appendix compares the following contracts:

- JCT Standard Building Contract 2011
- NEC3 Engineering & Construction Contract (April 2013)
- PPC2000 (2013 edition); and
- Infrastructure Conditions of Contract (Measurement Version, 2011).

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Topic	JCT Standard Building Contract 2011	NEC3 Engineering & Construction Contract (April 2013)	PPC2000 (2013 edition)	Infrastructure Conditions of Contract (Measurement Version, 2011)
1. Types of work/project used on	<p>The mainstream construction sector procuring works such as new-build office blocks, office remodelling and refurbishments, hotels, new apartment blocks, fit-out of shops and office premises, accommodation projects, education projects, sports stadia and leisure facilities.</p>	<p>The engineering and infrastructure sectors procuring works such as new roads and upgrades to the existing road network, new rail lines and assets, nuclear facilities, the London 2012 Olympics, and water utilities</p>	<p>Can be used in the mainstream construction sector, but has found particular use by local authorities (e.g. term maintenance arrangements for housing stocks), housing associations and some central government departments (e.g. the Ministry of Justice and the Department for Work & Pensions).</p>	<p>The engineering and infrastructure sectors procuring works such as new rail lines and assets, tunnelling, ports and docks, energy and water utilities.</p>
2. Documents comprising the contract	<p>The contract documents for the JCT Standard Building Contract 2011 'with Quantities' and 'with Approximate Quantities' versions are as follows:</p> <ul style="list-style-type: none"> - the Articles of Agreement (comprising the Recitals, Articles and Contract Particulars) - the Conditions of Contract - the Contract Drawings - the Contract Bills; and - (where applicable) the Employer's Requirements, Contractor's Proposals and CDP analysis. <p>The contract documents for the JCT Standard Building Contract 2011 'without Quantities' version are as follows:</p> <ul style="list-style-type: none"> - the Articles of Agreement (comprising the Recitals, Articles and Contract Particulars) - the Conditions of Contract - the Contract Drawings; and - where applicable, the Employer's Requirements, Contractor's Proposals and CDP analysis - (where Pricing Option A applies) the Priced Document or (where Pricing Option B applies) the Specification; and - (where Fluctuations Option C applies) the schedule referred to in 11b of the JCT Formula Rules. <p>An Information Release Schedule may also be used, although this is not listed within the definition of 'contract documents'.</p>	<p>The contract documents for the NEC3 ECC are as follows:</p> <ul style="list-style-type: none"> - the Contract Agreement - the Contract Data - the Conditions of Contract - the Schedule of Cost Components and Shorter Schedule of Cost Components - the Works Information - the Site Information; and - the Activity Schedule or bill of quantities. 	<p>The contract documents for the PPC2000 are as follows:</p> <ul style="list-style-type: none"> - the Commencement Agreement - the Project Partnering Agreement - the Partnering Terms - the Project Timetable - the Partnering Timetable - the Consultant Services Schedules and Consultant Payment Terms - the Project Brief incorporating any Contractor's Services Schedules - the Project Proposals - the Price Framework - the Joining Agreement - the Pre-Construction Agreement - the Risk Register - the KPIs and Targets; and - any other Partnering Document. 	<p>The contract documents for the ICC Measurement Version are as follows:</p> <ul style="list-style-type: none"> - the Form of Agreement (if required) - the Form of Tender and the written acceptance thereof - the Conditions of Contract - the drawings - the specification; and - the bill of quantities.

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3. Key parties involved in the contract	<ul style="list-style-type: none"> - the employer - the contractor - the architect/contract administrator - the quantity surveyor 	<ul style="list-style-type: none"> - employer - contractor - project manager - supervisor 	<ul style="list-style-type: none"> - client - constructor - client representative - partnering adviser - lead designer - consultants/design team - specialists 	<ul style="list-style-type: none"> - employer - contractor - engineer - engineer's representative
4. Project management	<p>The architect/contract administrator and the quantity surveyor both have roles in administering the contract. They are not a party to the contract, but are expected to maintain impartiality while administering the contract.</p> <p>The contractor must comply with the architect/contract administrator's instructions.</p> <p>Other project management tools that are present in other contracts are not generally found within this contract.</p>	<p>Good project management is a key theme of the NEC3 ECC. Examples include:</p> <ul style="list-style-type: none"> - key role for the project manager in the administration of the contract - early warning provisions (see Cl. 16.1) - risk reduction meetings (see Cl. 16.3); and - the use of a risk register. 	<p>Good project management is a key theme of the PPC2000. Examples include:</p> <ul style="list-style-type: none"> - the establishment of a core group (see Cl. 3.3) - the operation of an early warning system (see Cl. 3.5) - liaison with interested parties (see Cl. 3.9) - the use of objectives and targets (see Cl. 4) - the use of detailed partnering and project timetables; and - the use of a risk register. 	<p>The engineer is appointed by the employer to supervise the contract. The contract confers certain duties and obligations on the engineer (e.g. valuing variations and formally deciding on issues where either the employer or contractor is dissatisfied). Matters which might become disputes are notified and discussed under Cl. 66.</p>
5. Who has responsibility for design of the works?	<p>The employer retains primary responsibility for the design of the works.</p> <p>The contractor can be asked to design discrete parts of the works by using the Contractor's Designed Portion.</p>	<p>Responsibility for the design of the works should be detailed in the Works Information.</p> <p>The NEC3 ECC is flexible. The contractor may have little or no responsibility for design, or full responsibility for design.</p>	<p>The design of the project is developed by the lead designer and the other design team members (see Cl. 8.1).</p> <p>Optional wording in the Project Partnering Agreement can be used to place full responsibility on the constructor for the design, supply, construction and completion of the project.</p>	<p>The employer retains primary responsibility for design.</p> <p>Apart from any discrete part of the permanent works which the contract requires the contractor to design; the contractor is not responsible for the design or specification of the permanent works, or any part thereof, or of any temporary works design supplied by the engineer (see Cl. 8(2)).</p>

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6. The standard of design responsibility (e.g. fitness for purpose or reasonable skill and care)	Where there is a Contractor's Designed Portion, the required standard of design responsibility is intended to be the same as that of any independent architect or other professional designer directly employed by the employer and claiming to be competent to undertake work of this type (see Cl. 2.19.1). This is akin to an obligation to use reasonable skill and care.	A fitness for purpose obligation will be implied unless secondary Option X15 (limitation of the contractor's liability for his design to reasonable skill and care) is selected for use.	Each of the partnering team members is required to use the reasonable skill and care appropriate to their respective roles, expertise and responsibilities as stated in the partnering documents, as may be amended by the Project Partnering Agreement (see Cl. 22.1). If the constructor is acting in a design and build capacity, this wording could import a fitness for purpose requirement. Optional wording in the Project Partnering Agreement can also be used to import an express fitness for purpose requirement.	If the contractor is to be responsible for designing any part of the permanent works, the contractor shall exercise all reasonable skill, care and diligence in carrying out such design (see Cl. 8(2)).
7. Programming requirements	Programming requirements are lighter than in other contracts (see Cl. 2.9). The contractor is obliged to provide the architect/contract administrator with two copies of the master programme. The contractor shall provide a revised programme if an extension of time is granted.	The programme is a key document in the NEC3 ECC. Extensive programming obligations are contained in Cl. 31, 32 and 50.3.	The partnering timetable governs the activities of the partnering team prior to the date of the Commencement Agreement The project timetable is agreed in accordance with Cl. 6 and governs the implementation of the project after the date of the Commencement Agreement.	Programme requirements are detailed in Cl. 14. The contractor is required to submit a programme and general methods of construction to the engineer. These are intended to be management tools.
8. Sectional completion	Sectional completion will apply if the relevant parts of the contract documents (including the Contract Particulars) state that sectional completion is to apply and detail the relevant sections (see the Sixth Recital and the Contract Particulars).	Sectional completion will apply if secondary Option X5 is selected for use.	Sectional completion will apply if the relevant parts of the Appendix to the Form of Tender are completed identifying the relevant sections and the time for completion of each section.	Sectional completion will apply if the relevant parts of the Appendix to the Form of Tender are completed identifying the relevant sections and the time for completion of each section.

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9. Remedies for delayed completion	<p>Cl. 2.30–2.32 provide for liquidated damages in the event of delay in achieving practical completion of the whole of the works or, if applicable, sections of the works.</p> <p>The rate of liquidated damages is to be specified in the Contract Particulars.</p>	<p>If secondary Option X7 (delay damages) is not selected for use, in the event of delayed completion, the employer would have to bring an action for breach of contract and seek recovery of the actual losses they have suffered.</p> <p>If secondary Option X7 is selected for use, the parties can pre-agree the amount of damages the contractor will be liable for in the event of delayed completion.</p>	<p>The PPC2000 does not contain any express provision for a pre-fixed amount to be levied in the event of late completion. The client would be required to bring a claim for breach of contract and claim their actual losses instead.</p> <p>However, other provisions, e.g. those dealing with risk sharing, KPIs and incentives, may apply in the event of late completion, depending on whether selected for use and how drafted.</p>	<p>Cl. 47 provides for liquidated damages in the event of delay in achieving substantial completion of the whole of the works or, if applicable, sections of the works.</p> <p>The rate of liquidated damages is to be specified in the Appendix to the Form of Tender. A cap on liability for liquidated damages can also be expressed in the Appendix to the Form of Tender.</p>
10. Events entitling extensions of time	<p>These are known as 'Relevant Events'. They are detailed in Cl. 2.29.</p>	<p>These are known as 'Compensation Events'. They are detailed in Cl. 60.1.</p>	<p>These are contained in Cl. 18.3, plus any additional events stated in the Commencement Agreement.</p>	<p>These are contained in Cl. 44(1). Apart from the five specific grounds referred to in sub-clauses 44(1)(a), (b), (d), (e) and (f), the following causes of delay are also referred to in the contract (which link to sub-clause 44(1)(c)):</p> <p>Cl. 7(4), 12(2), 13(3), 14(8), 26(4), 31(2), 40(1), 42(3); and 59(4)(f).</p>
11. Events entitling payment of additional cost	<p>These are known as 'Relevant Matters'. They are detailed in Cl. 4.24.</p>	<p>These are known as 'Compensation Events'. They are detailed in Cl. 60.1.</p>	<p>These are contained in Cl. 18.3 plus any additional events stated in the Commencement Agreement (although certain events will not lead to payment of additional site overheads and an increase in the agreed maximum price, see Cl. 18.5 and 18.6).</p>	<p>Numerous events in the contract entitle the contractor to claim payment of additional cost. These events are spread around the contract and are not all gathered under one clause.</p> <p>For example, see Cl. 7(4), 12(3), 12(6), 13(3), 14(8), 17(2), 26(4), 31(2), 36(2), 36(4), 38(2), 40(1), 42(3), 50, and 52(3).</p>
12. Use of time-bars preventing claims for extensions of time and/or payment of additional cost	<p>There are no express time-bars in the contract, although contractors should be aware of the timescales for submitting claims under Cl. 2.27 and 4.23.</p>	<p>Time-bars are used in the NEC3 ECC. For example, see Cl. 61.3 and 61.4.</p>	<p>Time-bars are not used in the PPC2000 to prevent claims for extensions of time and/or payment of additional cost.</p>	<p>Time-bars are not used in the ICC Measurement Version to prevent claims for extensions of time and/or payment of additional cost.</p>

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13. Adverse weather conditions	Exceptionally adverse weather conditions are a relevant event, entitling the contractor to claim an extension of time (see Cl. 2.29.9).	Adverse weather is a compensation event under Cl. 60.1(13). The weather measurements to compare against should be detailed in the Contract Data.	The constructor will be able to claim an extension of time in respect of weather conditions, which the meteorological office records for the area nearest to the site indicate are exceptionally adverse for the time of year.	Exceptional adverse weather conditions entitle the contractor to claim an extension of time (see Cl. 44(1)(d)).
14. Site/ground condition risk	The risk of adverse site/ground conditions is not mentioned in the contract. In the absence of any express provisions to the contrary, the risk would ordinarily be with the contractor.	A risk for the employer. Adverse physical conditions are a Compensation Event (see Cl. 60.1(12)).	Subject to any exceptions stated in the Commencement Agreement and the discovery of any antiquities (see Cl. 18.3(ii)), the constructor bears the risk of the state and condition of the site (see Cl. 18.9).	This is dealt with in Cl. 12. The contractor is expected to take responsibility for physical conditions or artificial obstructions that could reasonably have been foreseen by an experienced contractor. The contractor will be able to claim for an extension of time and/or payment of additional cost if they encounter physical conditions (other than weather conditions or conditions due to weather conditions) or artificial obstructions which could not have been foreseen by an experienced contractor.
15. Partnering/ collaborative provisions	Paragraph 1 (Collaborative Working) of Schedule 8 (Supplemental Provisions) requires the parties to work with each other and other project team members in a cooperative and collaborative manner, in good faith and in a spirit of trust and respect. Whether or not Paragraph 1 of Schedule 8 applies to a particular contract will be determined by the Contract Particulars. The parties can also use the JCT's Partnering Charter (non-binding) where they do not wish to enter into a legally binding agreement but do wish to create a collaborative working environment.	There is a general obligation for the parties to act as stated in the contract and 'in a spirit of mutual trust and cooperation'. Secondary Option X12 (Partnering) can be selected for use.	The PPC2000 is drafted as a partnering contract. Partnering is at the heart of this contract. Cl. 4 details the partnering objectives and targets for each partnering team member. These include achieving 'trust, fairness, mutual co-operation, dedication to agreed common goals and an understanding of each other's expectations and values'. Cl. 3 also details how the partnering team members should communicate and organise themselves.	The ICC Measurement Version is drafted in a 'traditional' style and does not contain any partnering provisions or other expressly collaborative requirements.

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16. Key Performance Indicators (KPIs)	<p>Paragraph 5 (Performance Indicators and Monitoring) of Schedule 8 (Supplemental Provisions) allows the employer to monitor the contractor's performance by reference to performance indicators stated or identified in the contract documents.</p> <p>Whether or not Paragraph 5 of Schedule 8 applies to a particular contract will be determined by the Contract Particulars.</p>	<p>Secondary Option X20 (Key Performance Indicators) can be selected for use, but not if secondary Option X12 has also been selected for use.</p>	<p>Cl. 23 deals with KPIs and targets. These are detailed in Appendix 8 of the contract.</p> <p>Shared savings, shared added value and pain/gain incentives can also be agreed (see Cl. 13).</p>	<p>The ICC Measurement Version does not contain any provision for KPIs.</p>
17. Control over the contractor's key personnel	<p>There are no express provisions regarding control of key personnel employed by the contractor.</p>	<p>Dealt with in Cl. 24. The identity of any key personnel, their role and qualifications can be detailed in the Contract Data. The employer's consent is required to replace any key personnel.</p>	<p>There are no express provisions regarding control of key personnel employed by the constructor.</p>	<p>There are no express provisions regarding control of key personnel employed by the contractor.</p>
18. Controls on sub-contracting (including nominated sub-contractors)	<p>This is addressed in Cl. 3.7-3.9.</p> <p>The architect/contract administrator's consent is required to sub-contract the whole or any part of the works. The employer's consent is required to sub-contract the design of any Contractor's Designed Portion.</p> <p>The contract does not contain any provisions relating to nominated sub-contractors, but Cl. 3.8 retains provision for a list of three or more approved sub-contractors that the contractor can choose from.</p> <p>Cl. 3.9 sets out the minimum conditions required for any sub-contract.</p> <p>The JCT's Named Specialist Update (issued February 2012) can also be used to name individual specialists as domestic sub-contractors for identified parts of the works.</p>	<p>The contractor is required to submit the name of each proposed sub-contractor to the project manager for acceptance (see Cl. 26.2).</p> <p>The contractor may also be required to submit the proposed conditions of contract for each sub-contract to the project manager (see Cl. 26.3).</p> <p>The NEC3 ECC does not contain any provisions relating to nominated sub-contractors.</p>	<p>The PPC2000 does not contain any provisions relating to nominated sub-contractors, but Cl. 10 of the contract gives the client a high degree of involvement in the selection and approval of sub-contractors (known as 'specialists').</p>	<p>The contractor shall not sub-contract the whole of the works without the prior written consent of the employer (see Cl. 4(1)).</p> <p>The sub-contracting part of the works may require the engineer's approval (see Cl. 4(2)). Although the employment of labour-only sub-contractors does not require notification to the engineer (see Cl. 4(3)).</p> <p>Cl. 59 of the ICC Measurement Version deals with nominated sub-contractors. The contractor is given a right of objection (see Cl. 59(1)). The employer is expected to bear some of the risk for defaults by nominated sub-contractors.</p>
19. Coordination with other contractors	<p>This is addressed in Cl. 2.7, although this provision is frequently amended to provide more extensive obligations on the contractor to coordinate with other contractors.</p>	<p>This is addressed in Cl. 25 (working with the employer and others). The level of cooperation should be detailed in the Works Information.</p>	<p>Coordination with other contractors is not expressly mentioned, but could come under the obligation to liaise with interested parties (see Cl. 3.9).</p>	<p>This is addressed in Cl. 31(1).</p> <p>The contractor will be entitled to claim an extension of time and/or payment of additional cost if he incurs delay or cost beyond that reasonably to have been foreseen by an experienced contractor (see Cl. 31(2)).</p>

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20. Payment basis (e.g. lump sum, re-measurement, target cost)	The 'with Quantities' and 'without Quantities' versions are both fixed price lump-sum contracts. The only difference between the two being whether bills of quantities are used to define the quantity and quality of work. The 'with Approximate Quantities' version is a re-measurement contract. An approximate bill of quantities is used to define the quantity and quality of work which is then re-measured.	The basis of paying the contractor will depend on which payment option is selected for use: (i) Option A – priced contract with activity schedule (a lump sum contract) (ii) Option B – priced contract with bills of quantities (a re-measurement contract) (iii) Option C – target contract with activity schedule (a target cost contract) (iv) Option D – target contract with bills of quantities (a target cost contract) (v) E – cost reimbursable contract (a cost reimbursable contract) (vi) Option F – management contract (a cost reimbursable contract)	For any of the constructor's services performed prior to the date of the Commencement Agreement, the constructor is paid in accordance with the price framework (see Cl. 12.1). Any pre-construction activities are paid for in accordance with the Pre-Construction Agreement (see Cl. 12.2). Otherwise, prices for all aspects of the project are developed by reference to the price framework to establish an agreed maximum price (see Cl. 12.3). This is akin to a target cost arrangement. Any pain/gain incentives can be detailed in the Project Partnering Agreement (see Cl. 13.2).	Payment to the contractor is on the basis of re-measurement. The contract refers to a 'tender total' (the total of the bill of quantities or the agreed estimated total value of the works) and a 'contract price' (the sums to be ascertained and paid in accordance with the contract). The quantities in the bill of quantities are estimated only. Re-measurement will determine the actual quantities.
21. Retention	The employer may withhold retention monies (see Cl. 4.9.2.1 and 4.18–4.20). The rate of retention is specified in the Contract Particulars.	The employer may withhold retention monies if secondary Option X16 (Retention) is selected for use.	The employer may withhold retention monies from the agreed maximum price at the rate specified in the price framework (see Cl. 20.15).	The employer may withhold retention monies (see Cl. 60(5) and 60(6)). The rate and limit of retention are specified in the Appendix to the Form of Tender.
22. Compliance with Third Party Agreements	Not addressed in the contract. A bespoke amendment would be needed to deal with this.	Not addressed in the contract. A bespoke amendment in the 'Z' clauses would be needed to deal with this.	Not addressed in the contract. A bespoke special term would be needed to deal with this.	Not addressed in the contract. A bespoke amendment would be needed to deal with this.

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23. Insurance requirements	<p>Insurance requirements are detailed in Section 6 of the Conditions of Contract, the Contract Particulars and Schedule 3 (Insurance Options).</p> <p>The contractor will be required to provide employer's liability insurance and third party indemnity insurance (see Cl. 6.4.1). Professional indemnity insurance and insurance under Cl. 6.5.1 may also be required if so stated in the Contract Particulars.</p> <p>Responsibility for insurance of the works will be detailed in the Contract Particulars.</p>	<p>The contractor provides those insurances stated in the insurance table in Cl. 84.2 and any other insurances detailed in the Contract Data.</p> <p>The employer provides any insurances that may be stated in the Contract Data.</p>	<p>The Project Partnering Agreement and Commencement Agreement are used to detail which party/parties are required to procure the following insurances:</p> <ul style="list-style-type: none"> - insurance of the project and site - insurance (if any) of third party property damage - third party liability insurance - professional indemnity or product liability insurance - environmental risk insurance - latent defects insurance; and - whole project insurance. 	<p>The contractor procures joint names insurance for the works together with materials, plant and equipment for incorporation therein to the full replacement cost plus 10% to cover additional costs (including professional fees) (see Cl. 21(1)). The contractor also procures third party liability insurance in joint names (see Cl. 23(1)).</p> <p>If the contractor is required to design any part of the works, the employer may also require the contractor to procure and maintain professional indemnity insurance. A bespoke amendment would be needed to achieve this.</p>
24. Assignment	<p>Neither the employer nor the contractor shall be entitled to assign the contractor or their rights thereunder without the consent of the other party (see Cl. 7.1).</p> <p>This provision is frequently amended in practice.</p>	<p>The NEC3 ECC does not contain any restrictions on a party's right to assign the benefit of the contract.</p>	<p>Except as stated in the Project Partnering Agreement or otherwise in accordance with the partnering terms, none of the partnering team members may assign their rights without the prior consent of all other partnering team members (see Cl. 25.2).</p>	<p>Neither the employer nor the contract shall assign without the prior written consent of the other party, which consent shall not be unreasonably withheld (see Cl. 3(1)).</p>
25. Performance security	<p>The contract contains provisions for and template forms of advance payment bond, a bond in respect of offsite materials and/or goods, and a retention bond.</p> <p>The contract does not include provision for a parent company guarantee or performance bond. Bespoke amendments to the contract would be needed to incorporate requirements.</p>	<p>Secondary Options X4 (Parent Company Guarantee) and X13 (Performance Bond) are available for selection.</p> <p>If the employer requires the contractor or sub-contractors to provide other forms of performance security, bespoke amendments in the 'Z' clauses are required.</p>	<p>Under Cl. 19.9, the project brief is used to state whether the constructor is to provide:</p> <ul style="list-style-type: none"> - an advance payment bond - a performance bond - a parent company guarantee; and/or - a retention bond. <p>Details of the required performance security are to be included in the Commencement Agreement.</p>	<p>Cl. 10(1) governs provision of a performance bond. The maximum value of the bond is 10% of the tender total. The form of bond is annexed to the conditions of contract.</p> <p>If the employer requires the contractor to provide other forms of performance security (e.g. a parent company guarantee), bespoke amendments to the contract will be required.</p>

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26. Collateral warranties	Part 2 of the Contract Particulars is used to specify whether the contractor and any specified sub-contractors are required to provide collateral warranties. The required forms of collateral warranty are those drafted by the JCT.	The contract does not contain any obligations for the contractor and sub-contractors to provide collateral warranties. If the employer requires the contractor or sub-contractors to provide collateral warranties, bespoke amendments in the 'Z' clauses are required.	Partnering team members can be required to provide collateral warranties under Cl. 22.2. The contractor can be required to procure collateral warranties from specialists under Cl. 22.3.	The contract does not contain any obligations for the contractor and sub-contractors to provide collateral warranties. If the employer requires the contractor or sub-contractors to provide collateral warranties, bespoke amendments will be required.
27. Copyright	A licence to use the contractor's design documents is contained in Cl. 2.41. It will not take effect unless all sums due and payable to the contractor have been paid.	A copyright licence from the contractor to the employer is contained in Cl. 22.1. This is often amended as it is not as wide as other copyright provisions typically seen in the market.	A copyright licence from each partnering team member to the client is contained in Cl. 9.2.	Copyright licences from each of the employer and contractor are contained in Cl. 6(3).
28. Ability to instruct/request variations	The architect/contract administrator may issue instructions requiring a 'variation' (see Cl. 3.14). The term variation is defined in Cl. 5.1. The contractor does not have to comply with variations of the type under Cl. 5.1.2 provided he notifies a reasonable objection to the architect/contract administrator (see Cl. 3.10.1).	The project manager may instruct a change to the Works Information. If so, this will constitute a Compensation Event.	Any partnering team member may propose a change to the client at any time if it is demonstrably in the best interests of the project (see Cl. 17.1). The client may propose a change at any time (see Cl. 17.2).	Under Cl. 51(1), the engineer shall order any variation to any part of the works that is in his opinion necessary for the completion of the works, and may order any variation that for any other reason shall in his opinion be desirable for the completion and/or improved functioning of the works. Under Cl. 51(3), the contractor may submit proposals to the engineer to vary the drawings and specification.

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29. Valuing variations	<p>The valuation of variations is addressed in Cl. 5.2.</p> <p>If the value of a variation is not agreed between the contractor and employer, the quantity surveyor shall value the variation in accordance with the Valuation Rules (see Cl. 5.6–5.10).</p>	<p>An instruction by the project manager that changes the Works Information will, apart from in certain circumstances, constitute a Compensation Event (see Cl. 60.1(1)).</p> <p>The valuation of Compensation Events will depend on which payment option (A–F) is selected for use. The valuation of Compensation Events is different for each payment option.</p>	<p>The client and members of the partnering team have the ability to propose a change (see Cl. 17.1 and 17.2).</p> <p>Changes are valued by reference to the Price Framework (see Cl. 17.2 and 17.3).</p> <p>In the event of a dispute, the client representative may value a change on a fair and reasonable basis utilising prices for similar work in the Price Framework (see Cl. 17.4).</p>	<p>If requested by the engineer, the contractor submits a quotation for any proposed variation and the parties seek to agree the valuation of any variation (see Cl. 52(1)).</p> <p>If the contractor is not asked to submit a quotation or agreement is not reached, the contractor may submit a quotation to the engineer having due regard to any rates or prices included in the contract (see Cl. 52(3)).</p> <p>Failing agreement between the engineer and contractor, the valuation of the variation will depend on whether or not the work is of similar character and carried out under similar conditions to work priced in the bill of quantities (see Cl. 52(4)).</p> <p>The engineer has the right to fix the rate or price for any item of work that is affected by a variation (see Cl. 52(5)).</p> <p>The engineer may also order additional or substituted work to be carried out on a daywork basis (see Cl. 52(6)).</p>
30. Change in law	<p>This is addressed in Cl. 2.17.2.</p> <p>A change in law may be dealt with by an instruction requiring a variation depending on when the change in law occurs and which contract documents are affected.</p>	<p>Secondary Option X2 (Changes in the Law) may be selected for use. If so, a change in law that occurs after the contract date will be treated as a Compensation Event.</p>	<p>This is a client risk. Under Cl. 18.3(iv), the constructor will be able to claim an extension of time and payment of addition cost for a change in any law or regulation of the country in which the site is located after the date of the Commencement Agreement and which was not reasonably foreseen by the constructor.</p>	<p>The contractor is obliged to ascertain and conform in all respects with any general or local Act of Parliament and the regulations and bye-laws of any local or statutory authority (see Cl. 26(3)).</p> <p>The contractor may be entitled to an extension of time and/or payment of additional cost if the contract or instructions of the engineer are not in conformity with Acts of Parliament, regulations and bye-laws (see Cl. 26(3)(b) and 26(4)).</p>

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31. Force majeure	Force majeure is a Relevant Event entitling the contractor to claim an extension of time (see Cl. 2.29.14). Note that 'force majeure' is not defined in the contract. The occurrence of force majeure also entitles either party to terminate the contractor's employment under the contract.	Force majeure-type events are covered as a Compensation Event under Cl. 60.1(19). They are also events that would entitle the employer to terminate (see Cl. 91.7).	Force majeure is not expressly mentioned in the contract. Cl. 18.3(xvi) and the Commencement Agreement could be used to include force majeure as a client risk event, but the client may not wish to be liable for the financial consequences of an event of force majeure. The occurrence of force majeure-type events could lead to termination under Cl. 26.6 and 26.7.	Force majeure is not expressly mentioned in the contract. However, force majeure-type events could constitute a ground for an extension of time under Cl. 44(1)(f) or grounds for abandonment of the works under Cl. 63(1) or 63(2).
32. Defects rectification	Defects rectification is addressed in Cl. 2.38 and 2.39. The length of the rectification period is specified in the Contract Particulars. The architect/contract administrator issues the Certificate of Making Good when in his opinion the defects, shrinkages and other faults which he has required to have been made good, have been made good.	Defects rectification is addressed in Cl. 40-45. The supervisor plays a key role in notifying the contractor of defects and issuing the Defects Certificate.	Defects rectification is addressed in Cl. 21.4. The Defects Liability Period and period for rectifying defects are specified in the Project Partnering Agreement. Defects are rectified at the constructor's cost.	Defects rectification is addressed in Cl. 49, 50 and 61. There is no clear definition of 'defect'. To become entitled to the Defects Correction Certificate, the contractor is required to have rectified all outstanding defects and completed all outstanding work to the engineer's satisfaction.
33. Employer termination 'at will' and consequences	The employer does not have the right to terminate at will under this contract.	The employer may terminate for any reason (see Cl. 90.2). If so, the contractor is paid more on such termination than they would have been entitled to if the employer had terminated for other reasons (see the Termination Table in Cl. 90.2).	The client cannot terminate at will, but can terminate for non-achievement of any of the pre-conditions set out in Cl. 14.1, or for any other reason not reasonably foreseeable by the client arising at any time prior to the date of the Commencement Agreement (see Cl. 26.1). The client pays a valuation in accordance with Cl. 20 but no other amounts (see Cl. 26.1).	The employer does not have the right to terminate at will under this contract.

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34. Dispute resolution procedures	<p>Various dispute resolution mechanisms are included in Section 9 of the contract:</p> <ul style="list-style-type: none"> - mediation - adjudication; and - litigation or arbitration. 	<p>Option W1 – Used unless the UK's <i>Housing Grants, Construction and Regeneration Act 1996</i> applies (in which case Option W2 is used) – adjudication followed by litigation or arbitration.</p> <p>Option W2 – Used in the UK when the <i>Housing Grants, Construction and Regeneration Act 1996</i> applies – adjudication followed by litigation or arbitration.</p>	<p>Various dispute resolution mechanisms are included in Cl. 26 of the contract:</p> <ul style="list-style-type: none"> - a problem-solving hierarchy - a meeting of the core group - conciliation, mediation or other form of alternative dispute resolution recommended by the partnering adviser - adjudication; and - litigation or arbitration. 	<p>Various dispute resolution mechanisms are included in Cl. 66A–66D of the contract:</p> <ul style="list-style-type: none"> - amicable dispute resolution (whether by negotiation between the parties or by other means including conciliation or mediation) - adjudication; and - arbitration.
35. Limitations on liability	<p>Cl. 2.19.3 contains an optional provision for an overall cap on liability for loss of use, loss of profits and other consequential loss arising from any inadequacy in the contractor's design work.</p> <p>Otherwise, the contract does not contain any limitations on liability. If required, these would need to be expressly introduced via a bespoke amendment to the contract.</p>	<p>Secondary Option X18 can be selected for use:</p> <p>X18.1 – Limitation of liability for indirect or consequential loss.</p> <p>X18.2 – Limitation of liability for loss of or damage to the employer's property.</p> <p>X18.3 – Limitation of liability for defects in the contractor's design which are not listed in the Defects Certificate.</p> <p>X18.4 – Overall limitation on liability, apart from certain excluded matters.</p> <p>X18.5 – End of liability date.</p>	<p>The Project Partnering Agreement provides optional wording for net contribution clause or the ability to specify the exact proportions that the partnering team members would be liable for.</p> <p>Any other limitations on liability would need to be expressly introduced via the Special Terms.</p>	<p>The Appendix to the Form of Tender allows the parties to agree a limit on the contractor's potential exposure to liquidated damages for delay.</p> <p>Otherwise, the ICC Measurement Version does not contain any limitations on liability.</p>

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