MICHAEL ROWLINSON

A Practical Guide to the NEC3 Engineering and Construction Contract

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Introduction

1.1 General

In writing this guide I have set out to provide a view, much of it personal, as to how to get the most out of the 3rd Edition of the New Engineering Contract Engineering and Construction Contract (ECC). It is no secret that I am a fan of this contract and, as a result, may be willing to overlook what many perceive as it faults or weaknesses. In this guide I have tried to identify and suggest ways in which the procedures and aims of the contract can be simplified so that users do not become unnecessarily bogged down in procedure, but instead concentrate on achieving the goals of the ECC. This guide therefore goes through the procedure in detail as intended by the relevant clauses, but concentrates on practical issues to provide suggestions which the parties can use to achieve the overall intent and spirit of ECC and to reach the common goal.

With this guide, you get what it says on the cover: A Practical Guide to the NEC3 ECC Form of Contract. It is a guide to provide users of the ECC, both novice and experienced, with a view of all its various philosophies, principles, mechanisms and vagaries. The reader will be guided through the contract in a manner that will enable him or her to use this guide for reference without necessarily having to read it all: in other words, a practical guide rather than a stuffy text book. That said, there will be an amount of cross-referencing between sections in order to avoid repetition, so users will need to follow these references to find more detailed supporting guidance to particular issues. One area that is not cross-referenced is the term 'spirit of mutual trust and cooperation' as found in clause 10.1 of the ECC, although used extensively throughout the guide. If users are uncertain of the meaning of this phrase, then they need to re-read Chapter 4.

To assist the reader in finding where any particular clause, related legal case or UK statute is referred to in the text, a comprehensive index of such references is included in Tables A1.1–A1.3 in Appendix 1.

The more I have worked with this contract over the years, the more I have come to think of it not as a contract but as a Project Management Procedures Manual. This should not be a surprise as the original contract was drafted by project managers for construction professionals (and not by lawyers for other lawyers and judges).

Nevertheless, we must not lose sight of the fact that the ECC is a contract and, as such, legally binds those parties that enter into a contract incorporating these standard terms.

A Practical Guide to the NEC3 Engineering and Construction Contract, First Edition. Michael Rowlinson.

1.2 Mechanics not law

Being a practical guide, this book considers the mechanics of the contract and not of the law. As a practicing construction professional, I am interested in the successful outcome of the project for all parties involved. From my point of view, the employing organisation should get what it wants in terms of a project finished on time, to the required quality and within budget (providing, of course, that the budget was reasonable in the first place). The consultants should be recognised for their contribution, whether it be design, management or commercially orientated, and be paid a reasonable fee for the service they provide. The contractors and subcontractors who carry out the work should be allowed to work efficiently, be recognised as having contributed to the project and make a profit.

Only those projects that satisfy all of the above criteria should be considered as being successful. Every organisation, whether it be a company, partnership or individual who is involved in a project has its own needs and goals from that project. A good project will recognise this simple fact of business. It is when all the parties involved recognise each other's business goals (see Section 4.4.3) from the project, and work to align these goals, that success is achieved for all. As soon as one of the organisations involved feels dissatisfied, then the seeds of a dispute have been sown. As the industry knows, such seeds germinate easily and freely; once they appear on a project they can spread faster than any invasive weed.

Following on from the earlier editions, the ECC is drafted to impose the best practices within project management on the parties with the goal of avoiding disputes. It is the mechanics of these procedures and how to make them work effectively that is the focus of this guide.

As a consequence the guide does not consider the law in relation to the ECC, except where reference is needed to explain why something is included or to confirm that, in relation to the law in the United Kingdom, those requirements have been complied with by the ECC (or not as the case may be).

1.3 A simple formula for understanding a contract

Let's face it: all contracts are confusing when you first try to work out what it all means. I picked up a simple formula for considering contracts many years ago from an experienced Chief Quantity Surveyor of a contracting organisation, who came to my then local centre of The Chartered Institute of Building to give an evening talk on Joint Contracts Tribunal (JCT) Contracts. It didn't matter that he was talking about JCT Contracts. What I took away from that talk was a formula which I still use today in relation to any contract or procedural document that I encounter; this formula holds good in all such situations. I still have the piece of paper on which I noted the few words I needed to remind me of what to do. I rarely look at that piece of paper now as the formula has become second nature to me in relation to every contract or set of procedures which I read.

The formula is in two parts. The first part can be remembered by four words: WHO, WHAT, WHEN and HOW.

To expand, a contract is a document which sets out the rights and obligations of the parties to that contract, no matter what the contract is for. In the construction and related industries such contracts cover (usually by necessity) a range of extensive rights and obligations for both parties, how such rights and obligations are to be administered and the involvement of agents to carry out specified duties for one or both of the parties. WHO, the first of our four key words, relates to the administration of these rights and obligations. The WHO in the ECC will be one of the five named persons including the Employer, the Project Manager, the Supervisor, the Contractor or the Adjudicator. The specific roles of these individuals are covered in detail in Sections 5.2–5.6.

By its processes and procedures, the ECC sets out WHAT must or may be done in the event that a certain circumstance arises. The WHAT will involve the WHO doing something as set out in the contract.

WHEN that something is to be done is also set out by the contract. In the case of ECC, the timetable for WHEN these things shall be done is clear and forms a key part of the processes and procedures under the contract. Failure to comply with these processes and procedures in accordance with the requirements specified by WHEN can result in a right being forfeited because of this failure.

Finally, ECC sets out HOW the process or procedure shall be carried out. Again ECC is prescriptive as to the HOW, although much of the HOW is set out in general terms that apply across all of the subsequent detailed processes and procedures.

To summarise, the first part of the formula (which holds good for all contracts and not just the ECC) is to consider WHO does WHAT, WHEN they do it and HOW it is to be done. Understanding these things is important as ECC creates what are known in legal circles as conditions precedent. Although the English Courts do not like such provisions, they can be effective if drafted in certain terms (for further comment on conditions precedent see Section 1.5 below).

When dealing with specific processes and procedures in this guide, the WHO, WHAT, WHEN and HOW will be summarised as appropriate in each case.

1.4 Mandatory or discretionary

The second part of the formula I learnt that evening was to consider whether an obligation, requirement or procedure was mandatory or discretionary. The distinction is quite clear: if something is mandatory then it must be done in order to create a right for you and/or an obligation on someone else. If something is discretionary, then the party concerned can do it if they feel it is appropriate but lose nothing if they do not.

The key to whether something is mandatory or discretionary is in the little words. If a provision says that a party 'shall', 'must' or 'will' do something then the requirement to do that something is mandatory; that key little word leaves that party with no other option.

On the other hand, if the provision in question says that the party 'may' or 'can' do something, then that requirement is left to the discretion of that party i.e. the action is discretionary.

Appreciating whether a requirement or a provision is mandatory or discretionary is key to making sure that you, as a party or agent to the contract, do what is required of you at the right time and in the right way.

In the ECC, and indeed every other contract in the NEC3 family together with all the previous editions, there is little to doubt or question as to whether things are mandatory or discretionary. The first clause in the ECC, clause 10.1, clearly states that the Employer, the Project Manager, the Supervisor and the Contractor *shall* act as stated in this contract. The meaning is plain and clear: they are all required to carry out the procedures set out in the contract at all times and in the way stated. There is no discretion about it, unless such discretion is given expressly in a particular clause (there are a small number of such instances which will be pointed out as they arise).

1.5 Conditions precedent

Put as simply as possible, a condition precedent is a condition which acts to prevent either a right or an obligation from coming about until such time as the event prescribed as the condition precedent occurs. If a time limit is attached to the occurrence of the event (which is a condition precedent to a right or an obligation) and the event has not occurred within the time limit stated, the right or obligation can never come about.

It is important for users of the ECC to understand this principle; part of a mechanism which is commonly used includes such a condition precedent with a time limit. This actual condition will be highlighted when it is commented on.

While the courts in the UK do not traditionally like or support such clauses, they have enforced numerous examples where the wording has been clear. The first and second editions of the ECC were both said to include conditions precedent but it is generally felt that those conditions were not clearly enough worded to be effective. However, with the third edition, it is generally considered that the wording now used is almost certainly clear enough to be considered as an effective condition precedent.

1.6 Note on use of upper case in key words and phrases

Capital initial letters are used to identify terms that are defined as a feature of the ECC as set out in clause 11.1. Whenever I have referred to any such term I have maintained consistency with the ECC and followed that principle of using upper case for the first letter of defined terms throughout the text of this guide. The reader will however come across instances where the same terms are referred to in a general sense, when lower case is used. I have adopted this approach in order to distinguish between specific references to procedures, rights, obligations and other such matters which are directly linked to the ECC, and more general comments about good practice, the construction industry and other non-contract specific items.

For example, 'Contractor' refers to a specific issue that concerns the Contractor under the ECC and 'contractor' refers to the contractor in general terms.

Chapter 2
Background to the NECECC

2.1 The background: First edition

The timescale that we are looking at starts with a consultative document published in 1991 which was followed by the first edition in 1993, the second edition in 1995 and the third edition in July 2005 (NEC Panel, 2005a).

Many people believe the first edition was published in response to Sir Michael Latham's (1994) report, *Constructing the Team*. This report was however pre-dated by both the consultative document and First Edition.

In his report Sir Michael identified the NEC (as it was then called) as being the contract which, more than any other in general circulation at the time, contained many of the provisions which he considered should be adopted in Construction Contracts. Out of the thirteen key issues which Latham thought should be adopted, the NEC contained eight. The full list of key issues from *Constructing the Team* is as follows:

1. 'A specific duty for all parties to deal fairly with each other, and with their subcontractors, specialists and suppliers, in an atmosphere of mutual cooperation.
2. Firm duties of teamwork, with shared financial motivation to pursue those objectives. These should involve a general presumption to achieve "win-win" solutions to problems which may arise during the course of the project.
3. A wholly interrelated package of documents which clearly defines the roles and duties of all involved, and which is suitable for all types of project and for any procurement route.
4. Easily comprehensive language and with Guidance Notes attached.
5. Separation of the roles of contract administrator, project or lead manager and adjudicator. The Project or lead Manager should be clearly defined as the client's representative.
6. A choice of allocation of risks, to be decided as appropriate to each project but then allocated to the party best able to manage, estimate and carry the risk.
7. Taking all reasonable steps to avoid changes to pre-planned works information. But, where variations do occur, they should be priced in advance, with provision for independent adjudication if agreement cannot be reached.
8. Express provision for assessing interim payments by methods other than monthly valuation i.e. milestones, activity schedules or payment schedules.

A Practical Guide to the NEC3 Engineering and Construction Contract, First Edition. Michael Rowlinson.

Such arrangements must also be reflected in the related subcontract documentation. The eventual aim should be to phase out the traditional system of monthly measurement or remeasurement but meanwhile provision should still be made for it.

9. Clearly setting out the period within which interim payments must be made to all participants in the process, failing which they will have an automatic right to compensation, involving payment of interest at a sufficiently heavy rate to deter slow payment.
10. Providing for secure trust fund routes of payment.
11. While taking all possible steps to avoid conflict on site, providing for speedy dispute resolution if any conflict arises by a pre-determined impartial adjudicator/referee/expert.
12. Providing for incentives for exceptional performance.
13. Making provision where appropriate for advance mobilisation payments (if necessary, bonded) to contractors and subcontractors, including in respect of off-site prefabricated materials provided by part of the construction team.'

By comparison with the other major standard forms available at the time, the NEC's score of eight was three to four times better than any of its competitors. Encouraged by this praise, the NEC Panel set about revising the contract to incorporate the balance of the ideals and to take account of other comments that had been made.

2.2 The second edition

The job of revising the first edition was completed in 1995 and, in November of that year, the second edition was published. This edition not only incorporated revisions to the provisions of the Contract but also heralded a change in name to the 'New Engineering Contract Engineering and Construction Contract', shortened in use to NECECC.

The change in name was prompted by Sir Michael's report. He had commented that the name New Engineering Contract, coupled with it being published by the commercial arm of the Institution of Civil Engineers (Thomas Telford), served to suggest that it was a civil engineering contract. This impression was already restricting and would continue to restrict the use of this otherwise versatile contract to the civil and related engineering sectors; Sir Michael believed, however, that it was suitable for all types of construction including not least building.

The change of name had the desired effect as, over the next 10 years, the use of the NECECC by employers in the building industry steadily increased.

The principle aim of the revisions that brought about the second edition was to incorporate all thirteen of the ideals (see Section 2.1) set out in *Constructing the Team*. Provision was made in the second edition to cater for the five that had not been included in the first edition. It is interesting to note however, that the third edition only caters for twelve of the thirteen ideals. It has dropped the provision for trust funds found at Secondary Option V of the second edition, for the simple reason that it was never used.

2.3 The third edition

Throughout the life of the second edition, the NEC User's Group sought and collected feedback from its members on the aspects of the contract where it was felt that revision was required. Taking this feedback into account, the NEC Panel not only revised the NECECC but worked to consolidate the other contracts that they had drafted using the same principles and to bring them together into one unified family.

While the revision of the NECECC had at one time been expected in late 2002/early 2003, the work to the whole family delayed the publication until 14 July 2005. (Those readers with a keen eye will have noted that the NEC3 family of documents printed at that time all bear the date June 2005 on the front cover. This had been the intended month of publication; however production problems delayed the actual launch until July.)

It is not the purpose of this guide to describe the changes from the second to third editions[1]. This guide concentrates on administering projects using the third edition of the Engineering and Construction Contract (ECC). That said, the principles of the second edition are very similar; it is my belief that if you are familiar with only the second or the third edition, then you should easily understand the other. Equally anyone who can properly understand the ECC should be able, with a little thought and application, to use any of the other contracts in the NEC3 family.

2.4 Endorsement of NEC3 by the Office of Government Commerce

When the third edition of the NEC family of contracts was published in 2005, all of the 23 documents in the box set carried an endorsement from the UK's Office of Government Commerce (OGC) on their title pages and back covers: the use of the family was recommended to all public sector construction procurers. The recommendation was linked to a statement that such procurers must satisfy the objectives of the government's *Achieving Excellence in Construction* (AEC) principles. These principles had been launched in March 1999 with the aim of improving the performance of central government departments, executive agencies and non-departmental public bodies as clients in the construction industry. In the UK, depending on the state of the economy, these procurers account for between 35% and 40% of all new build, refurbishment and maintenance work carried out by the construction industry.

It is difficult to find any literature which lists the principles to which the OGC refer. What is published is a list of key factors, which in summary are:

- the establishment of integrated project teams;
- the use of short and effective lines of communication;
- the consideration of design, construction, operation and maintenance as a whole;

[1] For those interested in the revisions from the 2nd to 3rd editions, the author wrote a series of articles that were published in *Civil Engineering Surveyor* in 2005/2006 (Rowlinson, 2005a–d, 2006a–c). Some of these were also published by the NEC User's Group and all are available on Alway Associates website (www.alway-associates.co.uk).

- effective risk management;
- effective value management;
- the use of sound project management techniques; and
- creating partnering and long-term relationships.

Many of these matters have their roots in Sir Michael Latham's 1994 report *Constructing the Team* and Sir John Egan's report *Rethinking Construction* (The Construction Task Force, 1998). It is fair to say that both of these reports, and especially the former, influenced the development of the NEC family of contracts. The result was the endorsement by the OGC. The latest contracts in the family published in December 2009 also carry the endorsement; the only difference is that it is now given by the Construction Client's Board (formerly known as the Public Sector Construction Clients' Forum). Any reader who wishes to learn more about the AEC principles should visit the UK Government's website (http://www.ogc.gov.uk/guidance_achieving_excellence_in_construction_4675.asp).

2.5 General philosophy: Aims and objectives

The brief leading to the preparation of the initial consultative document of the ECC was to prepare a radical new style of contract form. The ECC certainly achieved that aim in that it is intentionally different from other forms of construction contract available at that time.

In order to comply with this desire for a contract that would be seen as radical, the drafting committee developed a number of aims and objectives which they sought to introduce into the form. These are summarised in Sections 2.6–2.9.

2.6 Flexibility

One of the principle aims was to make the ECC as flexible as possible, thereby allowing the provisions:

- to be used for engineering and construction work containing any or all of the traditional disciplines such as civil, electrical, mechanical and building work;
- to be used whether the Contractor has some design responsibility, full design responsibility or no design responsibility;
- to provide all the normal current options for types of contract such as competitive tender (where the Contractor is committed to his offered prices), target contracts, cost reimbursable contracts or management contracts; and
- to be used in any country in the world.

As this guide develops, readers will appreciate how this flexibility is provided and how numerous combinations can be used to create contracts with different risk profiles to suit the needs of an individual project or series of projects.

2.7 Clarity and simplicity

One of the more radical aims was to produce a contract that was clear and simple in its format and readily understandable by ordinary construction professionals, as opposed to being a contract that required a degree of legal ability in order to be able to understand the rights and obligations of the parties. This aim for clarity and simplicity has been incorporated in several ways including:

- the use of ordinary language rather than legal jargon;
- the use of short sentences at all times and by using subclauses to break up large bodies of text;
- the use of a logical structure which keeps like matters grouped together;
- the provision of flow charts for each procedure in the contract;
- a consistent approach to the management and allocation of risk across the different procurement routes;
- by limiting the extent of the text and clauses in order to provide a framework rather than by being prescriptive.

The decision to use clear and simple language with short sentences and subclauses provides the user with a contract that can be read in bite-sized pieces. The downside is that, for an industry that has been used to prescriptive rules in contracts, the lack of detail and direction regarding the next step in every resulting scenario is a concern to many. In order to overcome this concern, users must learn to appreciate the goal of a clause or subclause and adopt their working practices to achieve that goal. Practical examples of such steps are considered throughout the following chapters of this guide.

2.8 Stimulus to good management

Providing a contract that acted as a stimulus to the use of good project management techniques was central to the philosophy behind the drafting of the original contract and has been improved through the revisions. These procedures are designed to contribute to the forward-looking management philosophy, which is designed to manage problems rather than to simply allow them to degenerate into disputes.

This philosophy can be described by two basic principles, both of which impact upon the objective of stimulating good management:

- foresight which is applied collaboratively serves to mitigate problems and which in turn reduces risk for all those involved; and
- the clear division of function and responsibility helps accountability and motivates people to play their part in the successful management of the project.

In order for this philosophy to be successful, users of the form must adopt a cultural transition which is best described by quoting the opening paragraph of the Procurement and Strategies Guide (NEC Panel, 2005b) that forms part of the NEC3 family. This says:

> 'NEC is a modern-day family of contracts that facilitates the implementation of sound project-management principles and practices as well as defining legal relationships. Key to the successful use of NEC is users adopting the desired cultural transition. The main aspect of this transition is moving away from a reactive and hindsight-based decision-making and management approach to one that is foresight based, encouraging a creative environment with pro-active and collaborative relationships.'

The philosophy and cultural transition are contributed to and achieved by several matters including but not limited to:

- the provision of express requirements requiring collaboration between the parties and other personalities involved (see clause 10.1 and Section 4.2);
- providing provisions and procedures which encourage and reward foresight (including provisions that penalise a failure to use such foresight);
- by clearly allocating risks between the parties, with differing levels of risk depending on the main option chosen but with a consistent approach to risk across those main options;
- by a clear and consistent approach to the definition and administration of compensation events;
- by providing the Project Manager with options from which he can choose the solution to suit the particular problem;
- by providing procedures to obtain quotations from the Contractor in relation to problem situations or in advance of proposed change; and
- by the use of up-to-date, accurate and binding programmes which are regularly monitored and revised, thereby acting as a dynamic management tool.

2.9 Other characteristics

The family provides for different methods of exerting financial control through the selection of the preferred Main Option. The principle two methods used are by bills of quantities or an activity schedule, the latter being provided by the tenderer before the Contract is formed. In both cases the primary use of the document is only for assessing payments although, by agreement, the use of a bills of quantities can be extended.

The drafters of the NEC family have avoided the use of any cross-referencing from one clause to another. This serves to remove the need or temptation to divert from the clause the user is reading to other related clauses. Instead, the user is encouraged to simply follow the particular procedure covered by the clause he or she is reading. As a result, the contract seems uncluttered and comes across as very easy to read.

However, this principle has more than one downside. The lack of cross-referencing can lead users who are experienced in other contractual arrangements to become puzzled as to why the contract does not provide provisions that they would expect to see in relation to a matter they are following in a core clause. In all likelihood, such a provision is provided but in another core clause. The lack of cross-referencing in this respect

means that users have to understand how the contract is laid out and learn where to go to look for the conditions they expect to find in a contract of this nature.

The lack of cross-referencing also creates situations where what could be a very severe penalty for the failure to do something is not referred to at the point where the requirement to do that something is actually set out. Instead, the penalty is set out in another core clause. It is therefore not unknown for a user not to do something which he considers is simply procedural and without any consequences should the procedure not be followed; a penalty as severe as termination of the contract could however lurk elsewhere in the document.

Chapter 3
The Options: An Overview

3.1 General arrangement of the ECC

The principle way in which the flexibility referred to in Section 2.6 is provided by the ECC is in the arrangement of the conditions. The drafting body developed a system whereby users of the contract could select from a menu of options to produce a version of the conditions which was suitable for the project that was being considered.

That said, the arrangement of the ECC is based around nine core clauses which must in used in every contract. These nine core clauses are entitled:

- General;
- The *Contractor's* main responsibilities;
- Time;
- Testing and Defects;
- Payment;
- Compensation events;
- Title;
- Risks and insurance; and
- Termination.

The first part of the flexibility comes when the user, usually the Employer or the Project Manager on the Employer's behalf, selects which one of the Main Options the project is going to be carried out under. The ECC offers six Main Options for the user to choose. The selection of the Main Option will determine the risk profile that the Employer sets for the project subject to minor adjustments resulting from the selection of further options which will be discussed below.

The six Main Options that are available for selection are:

- Option A: Priced contract with activity schedule;
- Option B: Priced contract with bill of quantities;
- Option C: Target contract with activity schedule;
- Option D: Target contract with bill of quantities;
- Option E: Cost reimbursable contract;
- Option F: Management contract.

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It must be emphasised that the ECC requires that just one of the Main Options listed above are selected. The Main Option chosen dictates which additional conditions are added to the core clauses. Should more than one Main Option be included, the resulting contract would immediately contain conflicts which it would not be possible to resolve.

Comments on these Main Options are given in Section 3.5. Details of the additional conditions added to the core clauses are given in the relevant chapter that refers to the conditions under consideration.

Once the Main Option has been selected, the user must select one of the two dispute resolution options:

- Option W1 for contracts where the UK Construction Act *does not apply*; or
- Option W2 where the UK Construction Act *does* apply.

While the ECC states that one of the above options must be chosen, there would not, in the author's view, be anything to prevent users from not selecting either of the dispute resolution options and either insert their own procedures in Option Z or opt to rely on the relevant law. In the UK, adjudication would be implied for all contracts that fall within the definition of a construction contract under the Housing Grants, Construction and Regeneration Act 1996. In all jurisdictions that I am aware of, reference to the courts is always available.

The next part of the selection procedure that the Employer must consider is to decide which, if any, of the Secondary Options will be included within the Conditions. It must be emphasised that it is not necessary to select any of the Secondary Options; the core clauses and selected Main Option, in all six cases, will provide a perfectly workable and sound contract.

The only limit on how many Secondary Options can be selected is determined by the restrictions on the combination of choices; these restrictions are stated within the notes in brackets attached to some of the Secondary Options in the Schedule of Options.

The full list of Secondary Options available for use in the ECC is:

- Option X1: Price adjustment for inflation (used only with Options A, B, C and D);
- Option X2: Changes in the law;
- Option X3: Multiple currencies (used only with Options A and B);
- Option X4: Parent company guarantee;
- Option X5: Sectional Completion;
- Option X6: Bonus for early Completion;
- Option X7: Delay damages;
- Option X12: Partnering;
- Option X13: Performance bond;
- Option X14: Advanced payment to the Contractor;
- Option X15: Limitation of the Contractor's liability for his design to reasonable skill and care;
- Option X16: Retention (not used with Option F);
- Option X17: Low performance damages;

- Option X18: Limitation of liability;
- Option X20: Key Performance Indicators (not used with Option X12);
- Option Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996;
- Option Y(UK)3: The Contracts (Rights of Third Parties) Act 1999;
- Option Z: Additional conditions of contract.

The observant reader will have noted that the above list does not run consecutively; Secondary Options X8–X11, X19 and Y(UK)1 are not used within the ECC. Secondary Options X8–X11 and X19 are used elsewhere within the NEC3 family of contracts, as are some of those listed above. It is a feature of the family that the wording of the Secondary Options is consistent across all the contracts. For example, in every contract in the family where Secondary Option X16 (Retention) is available, the wording for those conditions is identical in every contract. This facility makes it relatively easy for a user to move between the different contracts in the family and be familiar with the terms and procedures in use.

Secondary Option Y(UK)1 is not used in any contract in the family. The only reference that the author has been able to find to this secondary option is in what appears to be a draft of the Guidance Notes to the third edition of Professional Services Contract, where Y(UK)1 is referred to as covering The Construction (Design and Management) Regulations 1994. This secondary option was not included in the published version of the Professional Services Contract issued in 2005 (NEC Panel, 2005c and d).

Detailed comment in relation to the Secondary Options is made either in Chapter 20 or, in certain instances, with the core clause conditions that a particular Secondary Option is linked to.

3.2 Other documents referred to

The conditions refer to other documents both in the core clauses Main Option conditions and in some of the Secondary Options. The documents that fall under this heading are:

- the Works Information (see Section 22.2);
- the Site Information (see Section 22.3);
- the Accepted Programme (see Section 12.2);
- the Schedule of Cost Components (see Section 14.2);
- an activity schedule (Main Options A and C) (see Section 13.5.1);
- a bill of quantities (Main Options B and D) (see Section 13.5.2);
- parent company guarantee (X4) (see Section 20.3);
- the Partnering Information (X12) (see Section 20.4);
- Schedule of Core Group Members (X12) (see Section 20.4.5);
- a Schedule of Partners (X12) (see Section 20.4.4) ;
- performance bond (X13) (see Section 20.5); and
- an Incentive Schedule (X20) (see Section 20.8).

Whichever documentation is required from the above list must be prepared at the appropriate time to ensure that information is properly passed between the parties at the required stage (be that during the tender stage, prior to the start date or during the currency of the works).

3.3 Contract Data

The Contract Data is a key element of the ECC and is divided into two parts. Part One is to be completed by the Employer. It is necessary to carry out this exercise before the documents are sent to the tendering contractors for pricing. In completing Part One, the Employer (or whoever completes the exercise for him) must carefully consider each entry and decide on the entry to be made, if any. The contents of the blank Contract Data can be used as a checklist by the compiler; it is judged good practice to consider every statement for each project rather than work from a version prepared for a previous project. Even for repeat streams of work, it is possible that certain statements will apply to some projects but not to others within the same work stream.

Part Two of the Contract Data is completed by the tendering contractor during the tender period. This part of the Contract Data consists of some basic information including details of the Contractor's key people and the Working Areas. More importantly, pricing information relating to the Prices, together with various rates and percentages for use in calculating payments and/or assessing compensation events (depending on the main option in use), is also included. The inclusion of the required information in Contract Data Part Two is vital if the Contractor's position in respect of payment is to be properly provided for.

The requirements for completing the Contract Data are considered in detail in Chapter 21.

3.4 The published documents

In respect of the ECC the following volumes are published with the third edition (2005) of the NEC family:

- the complete Engineering and Construction Contract (NEC Panel, 2005a);
- six merged versions of the ECC, one for each main option;
- the flow charts (NEC Panel, 2005e); and
- the guidance notes (NEC Panel, 2005f).

The above nine documents are only part of the total of 30 documents that make up the family at the time of writing. The author considers that anyone who understands and uses the ECC should be able to understand and use all of the other contracts in the family as they are so closely related and follow the same principles.

3.5 Main Options: General outline

The first part of the flexibility within the ECC is generated by the user making the choice of one of the six Main Options. In making this choice, the user selects the risk balance between the parties and sets the basis of the parties' obligations in relation to that risk. The titles of the six Main Options within the ECC are in Section 3.1 above.

The principle difference between these Main Options lies in the payment mechanism. By varying the payment mechanism, the allocation of risk between the parties is allocated differently between the Employer and the Contractor. It is generally recognised that Main Option A carries the least risk for the Employer while Main Option F carries the highest risk; the other Main Options following a sliding scale in between these two extremes.

Main Option A provides a priced contract where the total of the price tendered by the Contractor against each activity represents the amount he will be paid for that work, including all matters which are at the Contractor's risk. The Employer only carries the risk of the matters identified as being compensation events.

Main Option B is another priced contract but this time with a bill of quantities. Under this option, the Contractor is paid the actual quantity of work carried out at the rates in the bill of quantities. There is therefore some uncertainty over the final price as any inaccuracies in the bill of quantities will be corrected in the re-measurement process, being at the Employer's risk. The Employer also carries the risk for those matters identified as being compensation events.

Main Option C is the first of the target cost options. Target cost contracts are used in varying circumstances including, but not limited to:

- work which is not fully defined or detailed;
- where the risk is perceived to be high; or
- where the Employer is seeking to encourage efficiency gains over a series of similar contracts.

Under Main Option C, the Contractor tenders the Prices (the target) backed up by an activity schedule together with relevant percentages and rates. The percentages and rates are used for calculating the Defined Cost and Price of Work Done to Date (PWDD) (see Section 13.4.3), being what the Contractor is paid based on the resources employed to carry out the works. At the end, the PWDD is compared to the Prices (adjusted for compensation events). If the PWDD is less than the Prices then the Contractor receives a share of the gain; if the PWDD is greater than the Prices the Contractor pays his share of the overspend (see clause 53 and Section 13.6).

Main Option D follows the same approach as Main Option C, except that a bill of quantities is used against which the final Total of the Prices is re-measured. The re-measurement aspect provides less certainty of final prices than the use of the activity schedule, hence the Employer carries more risk under Main Option D than under Main Option C. It must also be said that, in practice, this option probably requires more administration than any other.

Main Option E is a cost reimbursable contract where the Employer simply pays for all the resources utilised by the Contractor to carry out the works, following a formula employing various tendered rates and percentages, subject only to the disallowing of costs resulting from the Contractor's inefficient use of resources.

Main Option F provides a management contract option under which the Contractor is paid a fee for carrying out prescribed duties. Each subcontract is entered into between the Contractor and the subcontractor and the Employer pays the actual cost of each such subcontract to the Contractor. The Contractor's fee will increase in line with any increases in the cost of the subcontracts.