

Foreword

In my *Constructing the Team* report of 1994 I commented 'if the NEC becomes normal construction contract documentation', which could be taken as my prediction of what may happen if my recommendations were followed through. I recommended that 'use of the NEC to increase' with the action by client bodies including the Department of the Environment in conjunction with other government departments, this action to take place 'as soon as possible'. I went on to recommend a target be set of 'one third of Government funded projects started over the next four years to use the NEC' and that 'use of the NEC (as amended) by private sector clients should be strongly promoted by client and industry bodies'. I highlighted what I considered constituted a modern contract, commenting that 'The New Engineering Contract contains virtually all of these assumptions of best practice, and others, which are set out in the Core Clauses, the main and secondary options'. I further commented that a 'full matrix of consultants' and adjudicators' terms of appointment should be published, interlocked with the main contract', and that 'provision should be made for a simpler and shorter minor works document'.

NEC has come a long way since these thoughts and recommendations were laid down in my report. It was then a single contract called the New Engineering Contract, a contract between an Employer and a Contractor, for construction and engineering works. As the family grew, New Engineering Contract became the name of the family of standard contracts in 1995, each contract having its own name, such as Engineering and Construction Contract, Engineering and Construction Subcontract and Engineering and Construction Short Contract. The family name was then shortened to NEC3 in 2005, with the '3' signifying the third generation launch of this suite of documents. The suite includes contracts, guidance notes and flow charts, and now provides contracts for the procurement of goods, works and services. We now have the full matrix, interlocking with the main contract, as well as having the shorter minor works contract I felt was needed. In fact, the family has grown well beyond my and most people's expectations from its early conceptual stages.

My targets for use by government-funded projects didn't meet the timescales, but NEC3 contracts are now significantly used by government departments. This is no doubt also aided by the Office of Government Commerce's decision in 2005 to endorse NEC3 contracts for use in the UK public sector.

NEC now has international coverage and, I am advised, has been used in around 30 countries to date, including very considerable use in South Africa and New Zealand. The upward trend is not only a testimony to the quality and content of the NEC3 contracts, but also a recognition that it both helps produce the parties' desired results and contains processes that clients and their supply chains require to meet their modern ways of doing business. Adversarialism is replaced with mutual trust and co-operation; hindsight with foresight; reactive behaviour with proactivity. We are part way there, but there is still much to do!

Use of the NEC continues to grow and it is being used on most major UK projects along the way. Channel Tunnel Rail Link, Heathrow Terminal 5 and the 2012 Olympics are but a few examples, Crossrail being the latest mega-project to use NEC. It is pleasing to note that very little case law has come from NEC contracts and let us hope this continues.

On to this publication, I was pleased to provide the foreword to Frances for *An Architect's Guide to NEC3*. I hope that architects see the benefits that the NEC system can bring to a project as well as appreciating the key role an architect plays in this.

Sir Michael Latham

Introduction

Over two decades, the NEC has evolved from a 'revolutionary' new form of contract to become a mainstream standard form contract which is particularly conducive to collaborative working and contractual partnering. Use of the NEC has grown steadily in all sectors of the construction industry over its lifetime and a working knowledge of it has become essential for all architects, allied professionals, clients and contractors involved in building projects. Following the OGC¹ endorsement of NEC3 on its publication in 2005, the use of any other form of construction contract on publicly procured projects has declined to a point where no one involved in such work can afford to be ignorant of NEC3. Use of the NEC is increasingly driven by client bodies and while architects in some specialist building sectors – such as healthcare and transport – are relatively conversant with the NEC, other architects have limited awareness of it. Architects are also increasingly exposed to the NEC in the private sector and need to be comfortable with it in relation to all potential projects.

The RIBA Plan of Work and architectural education at Part 3 level acknowledge that architects give procurement advice; in practice, a lack of consistent knowledge about the NEC among the architectural profession could put architects at risk of giving incomplete procurement advice. The key aim of this book is to make an adequate level of knowledge readily available to all architects. The book is intended to make NEC3 more accessible to many and at many levels.

Given the legacy of the Victorian era in the evolution of older style standard form construction contracts, there is particular need for all professionals to look very clearly at the provisions of NEC3 as a modern standard form contract, capable of supporting best practice in project management. Furthermore, given the historical divergence of the building and engineering sectors of the construction industry in the UK, there is also a particular need to distinguish the specific relevance of the multidisciplinary NEC3 contract to building sector professionals.

A number of books have been written on various aspects and uses of the NEC contract, encompassing its multidisciplinary nature; however, these have tended to focus on its use primarily in the engineering sector of the construction industry and on its legal interpretation. This is the first book to date to focus in detail on the specific needs of the building sector within the construction industry and consequently sets the NEC3 scene in the context of an architect's perspective and professional responsibilities.



1. Office of Government Commerce.

1 Background to the NEC

Procurement strategy

Contract typology

Conventionally, the parameters of time, cost and quality have been assessed in relation to choosing the correct type of contract for individual projects on the following basis:

- **time:** design and construction duration *and* certainty of end date
- **cost:** overall price (fees and construction) *and* certainty of final account
- **quality:** specification standards *and* workmanship on-site.

The procurement analysis of the relative importance of time, cost and quality has historically led to a decision as to whether a traditional, a design and build or a management procurement route is appropriate. However, such analysis has also long been predicated on the convention that time will be somewhat compromised under traditional procurement routes, quality will be somewhat compromised under design and build procurement routes and cost will be somewhat compromised under management procurement routes. The arguments leading to this convention are well rehearsed and need not be examined in detail here, as their only real relevance in the context of the NEC is that they represent an outmoded and arguably superseded approach to procurement strategy.

A further subset of contract typology is the payment mechanism, which conventionally includes the following categories:

- lump sum
- remeasurement
- cost reimbursable.

These generic payment mechanisms remain relevant in the context of the NEC, albeit the NEC offers greater sophistication in their implementation than earlier standard form contracts.

It should be noted that no type of standard form contract, including NEC3, offers either a 'fixed price' or a 'guaranteed maximum price' payment mechanism, these being inventions of those who seek to amend standard form contracts or draft bespoke contracts to highly polarise risk allocation.

Contract form

Professional drafting bodies historically published standard form contracts based on traditional procurement strategy² and subsequently responded to analysis of the so-called 'time/cost/quality triangle' by publishing additional design and build and management versions of their standard forms. Architects have long been used to providing clients with procurement advice, and indeed are expected to advise on both the 'Identification of procurement method'³ and the 'Review of procurement route'⁴ at a relatively early stage in a project. While this is an important advisory role, there seems to be a need for flexibility and further review.

2. I.e. the separation of design and construction.

3. RIBA Outline Plan of Work 2007 (amended November 2008/January 2009): Work Stage B.

4. Ibid.: Work Stage C.

Project-specific strategies

Increasingly, a need has developed for contracts to respond to individual project requirements in a more finely calibrated manner; project sponsors simply can no longer accept that only two-and-a-half out of the three parameters of time, cost and quality are adequately controlled. The resultant requirement for project-specific procurement strategies leads to what might be described as a hybrid procurement route. Such a route inevitably calls for much more flexible contracts than conventional procurement routes do, which might partly explain the apparent growth in the drafting of entirely bespoke construction contracts for important projects.

There is arguably a fourth procurement parameter that most twenty-first century construction projects require to be taken account of and that is risk. NEC3 sets out to offer a highly flexible format, which responds to the prototype nature of many construction projects and provides the ability to build up an appropriate contract. NEC3 enables a breakaway from conventional procurement analysis with no necessary compromise between time, cost, quality or risk management.

Genesis and philosophy of the NEC

Origins

The genesis of the NEC⁵ was an initiative in the mid-1980s by a new Legal Affairs Committee within the ICE⁶ in London. This initiative resulted primarily from a general dissatisfaction with Victorian-style standard form contracts within the construction industry, which had been conceived of prior to the commonplace requirement for complex multidisciplinary projects and which had become increasingly convoluted, in response to the perception of a 'high risk' and 'adversarial' construction industry. The initial strategy for a 'modern' contract was developed by a small team led by Dr Martin Barnes⁷ and a consultative version of the NEC was published in 1991; this was generally received with such enthusiasm that it was followed by an official first edition in 1993. The NEC received important endorsement in the UK Government/industry Latham Report⁸ of 1994 and the NEC second edition was published in 1995. The partnering ethos of the NEC contract was further endorsed in the UK Government/industry Egan Report⁹ of 1998. A review of the NEC in use and users' comments was undertaken by its drafting panel, under the auspices of its publisher¹⁰ and the third edition, NEC3, was published in 2005.

Application – what's in a name?

An important factor in the interest generated in the NEC was its applicability to a very broad range of 'engineering' projects. This was officially extended to include all construction projects following the Latham Report, although the revised title 'Engineering and Construction Contract' (ECC) – intended to emphasise the contract's wide range of applicability – never really captured end users' imagination and the original name NEC largely prevailed. Ironically, architects' initial interest in the NEC might have been greatly increased and subsequent interest accelerated had the title been revised to 'Engineering and Building Contract'. The answer to 'what's in a name?' in this instance seems to be 'quite a lot'!

5. New Engineering Contract.

6. Institution of Civil Engineers.

7. BSc(Eng) PhD FICE FCIQB FAPM FICES MBCS CCMi FREng CBE.

8. Latham, M. (1994) *Constructing the Team*, London: HMSO.

9. Egan, J. (1998) *Rethinking Construction: Report of the Construction Task Force*, London: HMSO.

10. Thomas Telford Publishing, London.

There was also a clear intention that the NEC should be conceived as a contract that would be operable globally (see Chapter 5) and the drafting is intended to facilitate diversity on a number of levels.

Guiding principles

The approach to the design of the NEC encompassed the concept that both the legal and the management requirements of a diverse range of modern projects could be met in a single document and that the avoidance of legalistic language would assist in that aim.

The principles of risk theory and risk management were also important considerations and an early decision was made that the contracting parties and their representatives should be required to act in a 'spirit of mutual trust and co-operation'.¹¹

The stated objectives of the NEC¹² are *flexibility, clarity and simplicity*, as well as providing a *stimulus to good management*. In practice, the NEC approach offers a range of benefits that are key to its success:

- 'pick and mix' contract conditions, to suit both the project and the project team
- plain English, giving both legal and project management rights and obligations equal status
- real-time project management, with contemporaneous decision-making, and
- cross-industry application, facilitating multidisciplinary working practices.¹³

The NEC3 contract family

The NEC3 family relationship for architects

It is pertinent to emphasise that the NEC has been designed for extremely flexible use patterns; different family members will therefore have different levels of significance for users, depending on each user's discipline. Architects will tend to be interested in all the family members (Figure 1); however, they are likely to have the closest relationship with the *Black Book* and the NEC3 Short Contract in the context of building contracts, and with the *Orange Book* in the context of professional services.

The NEC3 Subcontract and the NEC3 Short Subcontract will also be significant for architects in the context of specialist design and installation. Historically, architects have tended to take much less notice of subcontract conditions than main contract conditions, often believing the detail of them to be a contractor's responsibility and largely outside the sphere of an architect's influence. Given the decline in direct employment of staff by contractors and the greater reliance on specialist subcontractors to realise projects, architects who ignore subcontract conditions may do so at their peril. A number of drafting bodies have attempted to improve co-ordination between main contracts and subcontracts; however, NEC contracts have been at the forefront of a co-ordinated approach since their inception.

11. Core clause 10.1.

12. NEC3 Guidance Notes, June 2005.

13. Envisaged in the Banwell Report, 1964.

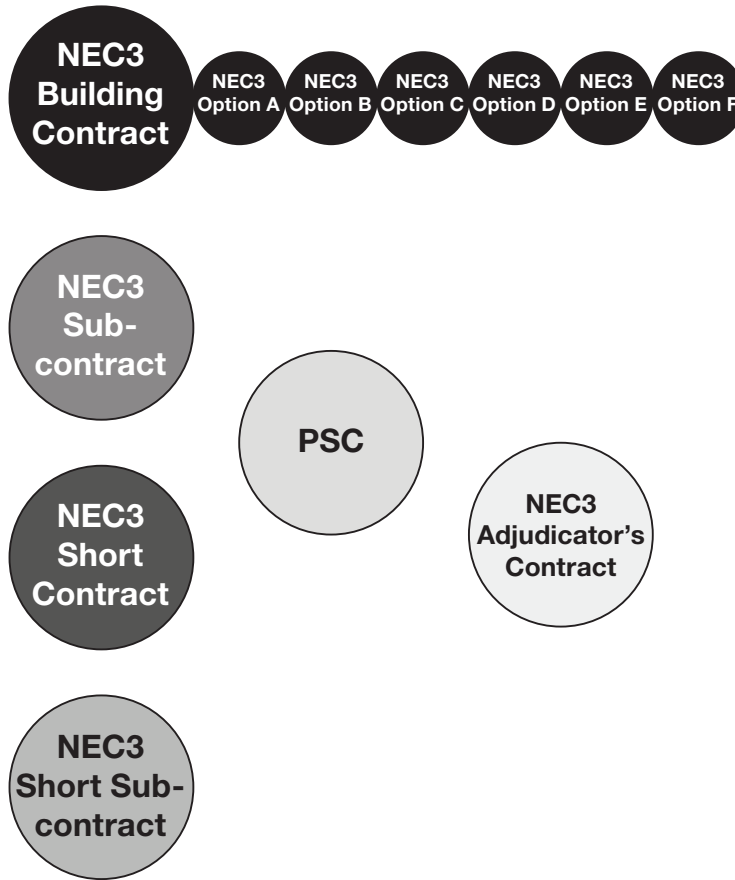


Figure 1 NEC3 'immediate' family: building projects

Compatibility, 'nesting' of contracts and uniformity

The risk of incompatible rights and obligations as between Employer and Contractor within the building contract or as between Employer and Consultants within their respective professional services contracts is greatly reduced with the provision for back-to-back contractual arrangements. The risk of incompatible obligations as between Contractor and Subcontractor is similarly reduced. The back-to-back drafting has the further benefit that there is no necessary connection between the status of the parties and the type of contract to be entered into, as between construction and professional services.

It is possible to 'nest' a number of contracts within each other, irrespective of whether the head contract is for construction or professional services. The conventional approach may be perceived as nesting subcontracts into a construction contract – or in the context of design and build procurement, also nesting professional services contracts into a construction contract. However, the flexibility of the NEC allows not only for the nesting of 'same' contracts within each other (e.g. NEC3 Subcontracts or NEC3 Professional Services Contracts), but also potentially for unconventional nesting, such as construction within professional services.

To encourage uniform application of the NEC methodology, comprehensive Guidance Notes and logical Flow Charts are published in parallel with each of the NEC3 contract versions, as well as guidance on Procurement and Contract Strategies. These do not form part of the contract itself, but nevertheless provide valuable assistance in understanding and operating the project management principles of the contract. Architects may find the Flow Charts particularly useful in operating NEC3 contracts, as the graphic representation and proven functionality encourage a rigorous and yet creative approach to project management.

NEC3 published contracts

Generally, there has been an attempt to provide as few separate contracts as possible, preferring the ‘pick and mix’ approach, although some separation has proved desirable. All previously published NEC contracts were revised in 2005 as the third edition and all new NEC contracts published since 2005 are also classified as NEC3 for consistency.

In order of their importance to architects, the NEC3 family comprises the following publications.

The NEC3 ‘Building’ (Engineering and Construction) Contract

(June 2005)

The so-called ‘**Black Book**’

Architects could be forgiven for unofficially renaming this the NEC3 ‘building’ Contract. It is very important for architects to bear in mind that this single book represents a standard form building contract blueprint, which is equally appropriate for traditional, design and build, management and hybrid procurements strategies. It is this universality that is of paramount importance in giving architects and their clients real choice, both at the outset of projects and, where necessary, during later stages of the procurement process.

The NEC3 ‘building’ Contract is also published individually for each of the six ‘payment mechanism’ main options – Options A to F (see *Main option clauses*, page 20) – although this is for convenience, not necessity, and should certainly not be misunderstood, in that it remains a single contract form.

The NEC3 Short Contract

(June 2005)

(Blue Book)

Building clients may find this version of NEC3 appropriate where the project is relatively straightforward, without the need for much fine-tuning of the contract conditions (see *Secondary option clauses*, page 32). The Employer and the Contractor communicate directly with one another, without a dedicated ‘contract administrator’, although there is provision for ‘delegated authority’ from the Employer. Perhaps the most helpful way of deciding whether the NEC3 Short Contract might be appropriate is to consider it to be suitable for low-complexity projects, rather than low-value projects. Historically, some standard form drafting bodies have made minor works contracts available and indicated that they are suitable for contracts up to certain (relatively low) monetary values. The critical point with the NEC3 Short Contract is that it may be eminently suitable for high-value contracts, provided that the work content of such contracts is relatively simple.

The NEC3 Subcontract

(June 2005)

The so-called '**Purple Book**'

It is no exaggeration to state that the only significant difference between the *Purple Book* and the *Black Book* is simply that the *Purple Book* refers to the Contractor rather than the Employer, and to the Subcontractor rather than the Contractor. However, this deceptively simple swap is in turn the key to the success of the NEC3 Subcontract – it is genuinely back-to-back with the *Black Book* (see *Subcontracting*, page 63).

The NEC3 Short Subcontract

(June 2005)

(Turquoise Book)

In a mirror of the *Purple Book–Black Book* relationship, it is also no exaggeration to state that the only significant difference between the NEC3 Short Subcontract and the NEC3 Short Contract is simply that the Short Subcontract refers to the Contractor rather than the Employer and to the Subcontractor rather than the Contractor. The Short Subcontract is therefore not only genuinely back-to-back with the Subcontract, but also offers an alternative to the *Purple Book* for works of a simple nature to be subcontracted under the *Black Book*.

The NEC3 Professional Services Contract (PSC)

(June 2005)

The so-called '**Orange Book**'

The PSC (see *Professional services*, page 59) is interesting for architects in that, like the NEC3 Subcontract, it offers the potential for back-to-back contractual arrangements. This potential may be particularly relevant where architects are employed initially by clients and subsequently by contractors under design and build procurement arrangements, in that there is likely to be much less potential for disparity between pre- and post-novation obligations. Another context in which the back-to-back potential is likely to assist architects is where they are involved in projects side-by-side with a number of other specialist consultants; whether the architects are acting as lead consultant or not, there will be much less risk of gaps and/or overlaps in the totality of the consultants' work.

The NEC3 Adjudicator's Contract

(June 2005)

(Green Book)

The adjudicator has had a role under the NEC Contract since prior to the introduction of statutory adjudication in England and Wales.¹⁴ It has always been considered advantageous to treat the adjudicator, as a person involved in a project, in a potentially positive way from the outset. The corollary to this perspective is that an NEC adjudicator should be signed up from the beginning; this is the basis upon which the NEC3 Adjudicator's Contract is intended to operate (see *Dispute management*, page 56).

The NEC3 Term Service Contract (TSC)

(June 2005)

(Grey Book)

Essentially, the TSC (see *Partnering*, page 64 and *Framework agreements*, page 68) is intended to operate with the same flexibility and control as the *Black Book* but for ongoing works, such as maintenance tasks, which cannot be fully defined from the outset.

The NEC3 Framework Contract

(June 2005)

(Beige Book)

The NEC3 Framework Contract (see *Framework agreements*, page 68) provides a standard umbrella contract for other NEC3 contracts to be potentially instructed to prequalified suppliers¹⁵ over a set period. Architects working in the context of public procurement¹⁶ may find the NEC3 Framework Contract a valuable addition to the NEC contract family, in that it will obviate the need for bespoke framework contracts, which can often be in conflict with the terms of standard form contracts under them.

The NEC3 Term Service Short Contract (TSSC)

(September 2008)

(Aubergine Book)

The NEC3 Term Service Short Contract (TSSC) offers a simple methodology for ongoing maintenance-type works of a straightforward nature. The Employer and the Contractor communicate directly with one another, without a dedicated contract administrator, although the contract provides the option of the Employer appointing an Employer's Agent.

14. Housing Grants Construction and Regeneration Act (HGCR Act) 1996 brought into force with The Scheme for Construction Contracts (England and Wales) Regulations on 1 May 1998.

15. Whether Consultants or Contractors.

16. Within the European Union.

The NEC3 Supply Contract

(December 2009)

(Red Book)

The NEC3 Supply Contract is intended for the purchase (locally or internationally) of high-value goods and related services, which may include design.

The NEC3 Supply Short Contract

(December 2009)

(Brown Book)

The NEC3 Supply Short Contract is intended for the purchase of relatively simple goods.

2 Structure and content of NEC3

‘Pick and mix’ assembly of the contract

Clause hierarchy and contract layout

Of paramount importance is that the NEC3 contract conditions are structured as a three-tier shopping list, comprising (1) core clauses, (2) main option clauses and (3) secondary option clauses, from which the necessary items must be selected (Figure 2). The selection criteria are to be found in the project type and risk profile.

A fundamental drafting decision, which has been key to the clarity of the NEC clauses in practice, was to take advantage of starting from the beginning and to arrange the document in a logical order. First, there is a clear group of concepts set out in nine *core clause* sections and, therein, a clear sequence of clauses dealing with the specific nature of each concept. Cross-referencing between clauses is avoided and related elements are kept within the individual sections. The drafting of these core clause sections is genuinely generic, with the clear intention that they are applicable to any project, whatever its nature, wherever it is in the world and under whatever jurisdiction. Second, there are six *main options*, of which one main option is chosen to determine the pricing mechanism applicable to a particular project; each main option adds the clauses required to operate that particular pricing mechanism. Third, there is a series of *secondary option* clauses to assist in fine-tuning the contract to meet the specific needs of the project; an assessment is made as to which, if any, of these secondary option clauses should be selected to meet the specific needs of the project. Finally, a decision is made as to which *dispute resolution option* applies.

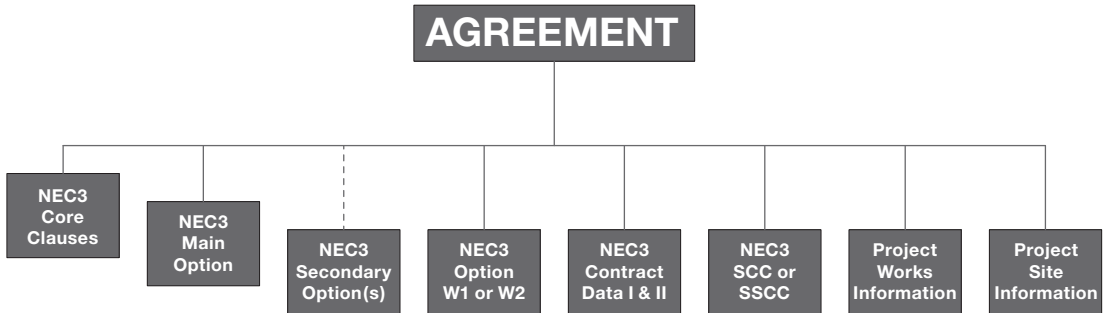


Figure 2 NEC3 contract structure

Necessary clauses

Many standard form contracts presuppose that all projects follow a similar enough route under a particular procurement strategy for all the contract conditions to be the same, i.e. generic. Even in the context of a clear decision as to the procurement route and therefore the contract form, this is inflexible and tends to favour a 'form-filling' mentality, rather than a creative approach to assembling the appropriate contract for a particular project. There are parallels for this distinction in other areas of an architect's expertise; for example, when completing an NBS-style¹⁷ specification, one approach would be to leave most standard clauses intact – just in case they prove useful, while the opposite approach would be to start from a blank sheet and to include only those clauses that are considered strictly necessary. NEC3 is analogous to the latter approach, which tends to result in shorter documentation, avoidance of extraneous or superfluous clauses and consequential clarity.

'Designing' the project-specific contract

While some organisations have deliberately put in place standard contract preparation procedures in order to maintain quality, it is clearly inadvisable to follow such procedures when assembling the contract conditions of an NEC contract. The whole point of the three-tier hierarchical structure is that it allows for the contract to be 'designed' as a tight fit for the needs of an individual project, and it is not only acceptable but positively to be expected that different main option and secondary option combinations will be chosen to augment the core clause sections for different projects. Even where projects are of a similar building type, or for the same client body, the decisions on appropriate options should be made afresh each time, in order to enable optimum performance of the NEC3 contract on any one project.

NEC3 is a proactive contract, requiring hands-on management from the outset, including putting it together. There is no default version of the contract and it simply will not be operable if its assembly does not follow the envisaged structure or is incomplete. NEC3 will appeal greatly in the context of wanting a pragmatic framework within which to manage real projects effectively. The skill set required of architects is such that they should be well equipped to respond to the need to assemble the contract creatively, carefully and in adequate consultation with their clients.

¹⁷.National Building Specification.

Core clauses

There are nine core clause sections, each of which deals with an individual concept (Figure 3).



Figure 3 NEC3 core clauses