DCMS

A SHORT GUIDE TO

The NEC4 Engineering and Construction Subcontract

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1.0 Introduction

1.1 Objective of this guide

The objective of this short guide is to provide new and existing users of the NEC4 Engineering and Construction Subcontract (NEC4 ECS) with an overview of its provisions and usage. To provide context, general information about the NEC contract forms, their philosophy, and history is also included. Where it is helpful, the guide highlights the principal differences between the NEC4 ECS and the NEC4 Engineering and Construction Contract (NEC4 ECC), the main contract under which the contractor will usually have been appointed. A recommended reading list is also provided in section 14.

This guide has been written by David Hunter of Daniel Contract Management Services Ltd. Further information about the author is provided at the end of the guide.

1.2 A modern form of contract

NEC contracts are modern forms of contract used for procuring works and services in the engineering and construction sector. The NEC forms are designed for the collaborative management of project risks within a legally binding agreement.

Originally designed and written by Dr Martin Barnes, the first edition of the New Engineering Contract was published by the Institution of Civil Engineers in 1993. The fourth edition of the contracts (NEC4), launched in 2017, is now one of the most widely used standard forms of contract in the UK and its use is growing internationally. The NEC4 ECS was first published in June 2017 and has since been reprinted with amendments in January 2019, October 2020 and January 2023. This guide is based on the latest amendments.

The NEC4 ECS is intended for the appointment of a subcontractor for engineering and construction work, including any level of design responsibility, where the contractor has been appointed under an NEC4 main contract. It is consistent with the other NEC4 documents and closely follows the structure, language and management processes of the NEC4 ECC, allowing the processes in the subcontract to operate in step with those in the main contract.

1.3 Drafting convention

NEC contracts use italics to denote terms that are identified in the contract data and defined terms have capital initials. NEC contracts use terms unique to the contract and new users should ensure they understand their meaning. Defined terms are set out in clause 11.2. For ease of reading, all NEC contract terms used in this guide are written in lower-case, non-italic type, and their meanings are intended to be as defined and identified in the NEC4 ECS.

2.0 Philosophy and objectives of NEC contracts

In 1985 the Council of the Institution of Civil Engineers (ICE) gave its approval of the Legal Affairs Committee recommendation to undertake a fundamental review of contract strategies for the design and construction of civil engineering projects. The main objective of the review was to identify needs for good practice. In response the ICE, led by Dr Martin Barnes, produced a specification for the new contracts with the following aims:

- Achieve a higher degree of clarity than existing contracts.
- Use simple, commonly occurring language and avoid legal jargon.
- Repeat identical phrases, if possible.
- Produce core conditions and exclude contract specific data, to avoid the need to change the core terms.
- Precisely and clearly set out key duties and responsibilities.
- Aim for clarity above fairness.
- Avoid including details that can be more adequately covered in a technical specification.

Implementing the aims of the specification, NEC contracts are drafted around three principal objectives:

- Flexibility
- Clarity
- Stimulus to good project management

2.1 Flexibility

NEC contracts provide for a range of procurement strategies, including:

- Traditional contracting (client design)
- Design and Build (contractor design)
- Early contractor involvement
- Design, Build and Operate
- Term service arrangements
- Alliancing (multi-party contract)
- Supply of goods
- Management contracting
- Facilities management

All NEC contracts include nine core clauses representing standardised terms. Users then have the option to use different commercial models, including fixed-price, target-cost, and cost-reimbursable contracts, by selecting the appropriate main option. Secondary options allow the parties to include additional contractual terms on a project-by-project basis. The secondary options have equal standing to the core clauses and main options and play an important role in risk allocation.

The core and main option clauses are purposely drafted to be non-jurisdictional allowing NEC contracts to be used globally. Laws governing security of payment and adjudication are provided for in optional Y and W clauses. Z clauses (additional conditions of contract) provide further flexibility.

There are no separate ‘build only’ or ‘design and construct’ versions of the subcontract. The NEC4 Engineering and Construction Subcontract can be used with any level of design responsibility, with the extent of the subcontractor’s design being stated in the subcontract scope.

2.2 Clarity

NEC contracts are written with their users in mind. They are drafted in plain English avoiding Latin terms and legal terminology. Sentences and paragraphs are shorter than those seen in traditional contracts, and there is no cross-referencing between the clauses. Bullet points are used to organise and structure the clauses, making what would otherwise be long, complicated clauses easier to read and understand.

A structured approach with core clauses, main and secondary options provides a logical framework for both preparation and use. Terms are defined at the start of the contract with project-specific information and documents identified in the subcontract data. An index provides a comprehensive list of key terms with clause references to help aid navigation. Despite this approach to simplicity and clarity, the parties will not readily understand NEC contracts or how to operate them without guidance and training.

2.3 Stimulus to good project management

NEC contracts are different from other forms of contract in many ways. A key difference, and one that sets them apart from traditional contracts, is that they incorporate the principles of good project management, requiring the parties to adhere to processes designed to manage time, cost and quality.

Actions must be taken within prescribed timescales and there are contractual remedies for failing to comply.

The roles and responsibilities of the parties are defined with clear protocols for communication and powers of delegation. Submissions made by the supplier require objective decision making by the party administering the contract, which in the NEC4 ECS is the contractor, with reasons for non-acceptance limited to those stated in the contract.

A detailed post-contract risk management regime is included in all long-form versions of the contract, comprising early warning notices and mandatory meetings to seek solutions to prevent or reduce matters.

Time management is a fundamental aspect of NEC contracts. Regular revisions to the programme submitted for acceptance are required. Programmes must include an accurate record of completed work and a realistic forecast of the remaining work before acceptance is granted. The accepted programme is used to monitor progress, plan future activities, and serves as the basis for assessing any changes to the subcontract completion date due to compensation events.

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3.0 The NEC4 suite and usage

3.1 NEC4 suite

The publishers described the fourth edition as “an evolution not a revolution”. Feedback from NEC3 users, best practice and the latest legal developments formed the basis of changes made. There are twenty different contracts in the NEC4 suite, including new contracts for multi-party alliancing, design, build and operate, and facilities management.

The NEC4 suite of contracts comprises:

- Engineering and Construction Contract (ECC)
- Engineering and Construction Short Contract (ECSC)
- Engineering and Construction Subcontract (ECS)
- Engineering and Construction Short Subcontract (ECSS)
- Professional Service Contract (PSC)
- Professional Service Short Contract (PSSC)
- Professional Service Subcontract (PSS)
- Term Service Contract (TSC)
- Term Service Short Contract (TSSC)
- Term Service Subcontract (TSS)
- Supply Contract (SC)
- Supply Short Contract (SSC)
- Framework Contract (FC)
- Dispute Resolution Service Contract (DRSC)
- Design Build and Operate Contract (DBO)
- Alliance Contract (ALC)
- Facilities Management Contract (FMC)
- Facilities Management Subcontract (FMS)
- Facilities Management Short Contract (FMSC)
- Facilities Management Short Subcontract (FMSS)

3.2 Subcontracts in the NEC4 suite

The NEC4 suite includes subcontract forms that sit beneath its principal main contracts, so that the same collaborative management processes can be carried down the supply chain. In the preface to the NEC4 ECS, the chair of the NEC4 Contract Board identifies new forms of subcontract to improve integration of the supply chain as one of the features of NEC4.

The NEC4 ECS is the subcontract for engineering and construction work where the contractor has been appointed under an NEC4 main contract. Because it uses the same structure, terminology and procedures as the NEC4 ECC, a contractor working under the NEC4 ECC can manage its subcontractors using processes that its staff already understand. The NEC4 Engineering and Construction Contract User Guides and Flow Charts include guidance and flowcharts on the subcontract.

3.3 The NEC4 Engineering and Construction Short Subcontract

The NEC4 suite includes a short form alternative to the NEC4 ECS, the NEC4 Engineering and Construction Short Subcontract (ECSS). The ECSS is intended for the appointment of a subcontractor for straightforward engineering and construction work which does not require sophisticated management techniques and imposes only low risk on both parties.

Like the NEC4 ECS, the ECSS is based upon similar principles to the NEC4 main contracts and uses common names and definitions, so the contractor and the subcontractor operate familiar procedures. The main differences lie in its simpler structure:

- there is no choice of main options; the subcontractor is paid using a price list, either a lump sum for each item once it is complete or by actual measurement of items with quantities, which can include units of time,
- secondary options are not used, although delay damages, retention, provisions for when the Housing Grants, Construction and Regeneration Act 1996 applies (including adjudication) and additional conditions are available as optional entries in the subcontract data,
- multiparty collaboration under option X12 is not available, and
- the ECSS is not normally suitable where the subcontractor is responsible for creating an information model, although it may be required to provide information in a digital format so that it can be added to the model.

The ECSS suits subcontract packages with a fairly straightforward, low risk scope of work for which a lump sum or measured price is appropriate. Where the subcontract works are more complex or carry greater risk, or a target or cost reimbursable payment mechanism or secondary options such as X10 or X12 are needed, the NEC4 ECS will be the more appropriate choice. Whichever form is chosen, there is nothing to prevent the subcontract using a different payment mechanism from that used in the main contract.

3.4 Use of NEC contracts by the UK public sector

The catalyst for the UK Government's endorsement of NEC contracts was the findings of Sir Michael Latham in his review of procurement and contractual arrangements published in the 1994 report "Constructing the Team". The report commended the principles underlying the NEC contract and recommended its adoption by the public and private sectors. The UK Government Construction Board now recommend the use of NEC contracts. Since 1994, the NEC forms have become the first choice for many parts of the public sector, including central government, county and local councils. The NEC forms of contract have been used on notable projects, including the London 2012 Olympics, Heathrow Terminal 5, Crossrail (Elizabeth Line), High Speed 2, and Hinkley Point C.

3.5 International use of NEC contracts

NEC contracts are increasingly popular with clients outside the UK. According to the Hong Kong Government Development Bureau the value of works and services using NEC contracts between 2009 and 2025 was HK$450 billion. Other notable users include sporting venues for the Lima Pan America Games, Sydney Water's £2.2 billion P4S investment programme for its water and wastewater assets. The NEC forms of contract are also used in South Africa, New Zealand and Singapore.

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4.0 Structure of the NEC4 Engineering and Construction Subcontract

The NEC4 ECS comprises standard clauses organised into several sections, with main and secondary options used to tailor the subcontract to the contractor's and the project's requirements. To form a complete agreement, several additional documents are required.

4.1 Sections of the ECS standard form

The standard form of the NEC4 ECS includes the following sections that collectively form the conditions of subcontract:

- Core clauses
- Main option clauses
- Resolving and Avoiding Disputes option
- Secondary option clauses
- Schedule of cost components
- Short schedule of cost components
- Subcontract data

Additional conditions of subcontract may be incorporated by including Z clauses (option Z).

The NEC4 ECS does not include a form of agreement within the subcontract.

4.2 Relationship with the main contract

Although the NEC4 ECS is a separate contract between the contractor and the subcontractor, it is designed to operate alongside the main contract. Subcontract data part one identifies the works in the main contract, the client, the project manager and the supervisor in the main contract, and the main contract adjudicator. A number of provisions link the two contracts, including:

- the contractor consulting the project manager and the client about a subcontractor's proposal to change the subcontract scope (clause 16.1),
- the contractor instructing the subcontractor to attend an early warning meeting between the project manager and the contractor where a main contract matter also affects the subcontract (clause 15.2),
- the right of the client, as well as the contractor, to use the subcontractor's design (clause 22.1),
- access to the work for the project manager and the supervisor (clause 27.2),
- recovery from the subcontractor of additional amounts the contractor pays to the client where the condition for a key date is not met (clause 25.3),
- the joining of subcontract disputes with related main contract disputes (options W1 and W2), and
- the contractor's right to terminate the subcontract if its own obligation under the main contract has been terminated (clause 91.9).

Many of the time periods in the NEC4 ECS differ from the equivalent periods in the NEC4 ECC. When preparing the subcontract data, the contractor should check the periods stated in both contracts to ensure it can meet its own obligations under the main contract.

4.3 Subcontract scope

The subcontract scope sets out the requirements, constraints, and expectations for the work to be carried out. It specifies and describes the subcontract works and states any constraints on how the subcontractor provides the subcontract works (clause 11.2(18)). It defines what the subcontractor is to

do and, where applicable, what parts of the subcontract works are to be designed by the subcontractor. The subcontract scope provided by the contractor is referenced in subcontract data part one and subcontract scope provided by the subcontractor for its design may be referenced in subcontract data part two. Subcontract scope may also be given in an instruction given in accordance with the subcontract.

The subcontract scope should be consistent with the scope of the main contract so that, by providing the subcontract works, the subcontractor enables the contractor to meet its own obligations. A well-prepared subcontract scope enhances clarity, reduces ambiguity, and mitigates the risk of disputes by making the parties' responsibilities and expectations explicit.

4.4 Site information

The site information describes the site and its surroundings and is in the documents which the subcontract data states it is in (clause 11.2(15)). It is provided by the contractor with the purpose of providing details about the physical conditions of the site and its surrounding areas. Site information is the primary document used to assess compensation events for unforeseen physical conditions (clause 60.1(12)).

In judging the physical conditions, the subcontractor is assumed to have taken into account the site information, publicly available information referred to in it, information obtainable from a visual inspection of the site and other information which an experienced subcontractor could reasonably be expected to have or to obtain (clause 60.2). If there is an ambiguity or inconsistency within the site information, the subcontractor is assumed to have taken into account the physical conditions more favourable to doing the work (clause 60.3).

4.5 Other documents required, depending on contract strategy

In addition to the subcontract scope and site information, other documents and information may be required, depending on the contractor's contract strategy and the chosen main and secondary options. These documents should be referenced in the subcontract data or provided in the subcontract scope. The other documents, when relevant to the subcontract, that should also be referenced in subcontract data are:

- Programme
- A priced activity schedule (option A and C)
- A priced bill of quantities (option B and D)
- The information execution plan (X10)
- Schedule of partners and partnering information (X12)
- The incentive schedule including key performance indicators (X20)
- The climate change plan (X29)
- The performance table (X29)
- Trust deed and joining deed (Y(UK)1)

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The documents and information that should be referenced in the subcontract scope are:

- The form of the ultimate holding company guarantee (option X4)
- The forms of the undertakings to the client and undertakings to others (option X8)
- Information model requirements (X10)
- The form of the performance bond (X13)
- The form of the advanced payment bond (X14)
- The form of the retention bond (X16)
- Climate change requirements including the climate change partners (X29)

The subcontract scope should also state the subcontractor's health and safety requirements (clause 27.4), the form in which programmes are to be submitted (clause 31.2) and the form of the application for payment (clause 50.2).

4.6 Core clauses

The core clauses form the foundation of all NEC4 contracts and apply to whichever main and secondary options are chosen. The nine core clauses of the NEC4 ECS are:

1 General
2 The subcontractor's main responsibilities
3 Time
4 Quality management
5 Payment
6 Compensation events
7 Title
8 Liabilities and insurance
9 Termination

4.7 Main (payment) option clauses

There are five main options available in the NEC4 ECS of which one is chosen. The main option clause is combined with the core, secondary options and dispute resolution clause to form the conditions of subcontract. The main option represents the payment mechanism for the subcontract and is the principal means by which the risk of cost is allocated between the parties. It is often referred to as the payment option. The main options in the NEC4 ECS are:

- Option A: Priced subcontract with activity schedule
- Option B: Priced subcontract with bill of quantities
- Option C: Target subcontract with activity schedule
- Option D: Target subcontract with bill of quantities
- Option E: Cost reimbursable subcontract

Unlike the NEC4 ECC, the NEC4 ECS does not include option F (management contract).

4.8 Resolving and avoiding disputes

The NEC4 ECS provides two options that set out the procedures for resolving and avoiding disputes, one of which must be selected. Option W1 is used when the Housing Grants, Construction and Regeneration Act 1996 does not apply and option W2 is used when it does. The NEC4 ECS does not include the dispute avoidance board procedure provided by option W3 of the NEC4 ECC.

Under both options, a dispute may be referred to the senior representatives of the parties, who have up to three weeks to try to resolve it before producing a list of the issues agreed and not agreed. Under option W1 this step is mandatory, with the dispute reference table setting time limits for referral. Under option W2 the dispute is referred to the senior representatives only if the parties agree, and a party may refer a dispute to the adjudicator at any time (W2.2(1)).

A distinctive feature of the NEC4 ECS is the provision for resolving related disputes together. Where a matter disputed under the subcontract is also disputed under the main contract, the contractor may submit the subcontract dispute to the main contract adjudicator at the same time as the main contract submission. The subcontractor then becomes a party to the main contract adjudication and the disputes are decided together (W1.3(5) and W2.3(4)). Under option W2 this requires the subcontractor's consent. Similarly, the subcontractor may refer a related subsubcontract dispute to the adjudicator at the same time as the subcontract referral (W1.3(4) and W2.3(3)).

4.9 Secondary (X) option clauses

In addition to the main option, the parties may include secondary X options in their subcontract. It is not mandatory to include any of these options, although in practice it is unlikely that none would be used. The secondary options enable further refinement of contractual risk allocation and the inclusion of additional features to incentivise and facilitate effective project management. The secondary options available for use with the NEC4 ECS are:

- X1: Price adjustment for inflation (used only with options A, B, C and D)
- X2: Changes in the law
- X3: Multiple currencies (used only with options A and B)
- X4: Ultimate holding company guarantee
- X5: Sectional completion
- X6: Bonus for early completion
- X7: Delay damages
- X8: Undertakings to the client or others
- X9: Transfer of rights
- X10: Information modelling
- X11: Termination by the contractor
- X12: Multiparty collaboration (not used with option X20)
- X13: Performance bond
- X14: Advanced payment to the subcontractor
- X15: The subcontractor's design
- X16: Retention
- X17: Low performance damages
- X18: Limitation of liability
- X20: Key performance indicators (not used with option X12)
- X21: Whole life cost
- X29: Climate change

Option X22 (early contractor involvement) is not available in the NEC4 ECS and option X19 is not used. Where options such as sectional completion (X5), delay damages (X7) and limitation of liability (X18) are used in both contracts, the contractor should consider how the subcontract entries align with those in the main contract.

4.10 Secondary (Y) option Clauses

There are three Y options available for use with the NEC4 ECS:

- Y(UK)1: Project bank account
- Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996
- Y(UK)3: The Contracts (Rights of Third Parties) Act 1999

Option Y(UK)1 operates with a project bank account established under the main contract. Where the subcontractor is identified as a named supplier in the main contract, it signs the trust deed with the client, the contractor and the other named suppliers. Where it is added as a named supplier after the contract date stated in the main contract, it signs the joining deed before the first assessment date (Y1.10 and Y1.11).

4.11 Subcontract data

Subcontract data contains the subcontract-specific information required to activate and operate the subcontract's mechanisms within the project. Subcontract data is in two parts. Part one is completed by the contractor and includes data such as the selected main and secondary options, the subcontract starting date, the subcontract access dates, and the periods for reply for both the contractor and the subcontractor. It also identifies the works in the main contract, the client, project manager and supervisor in the main contract, and the main contract adjudicator.

Part two is completed by the subcontractor and includes details such as the fee percentage, the subcontract working areas, the key persons, the subcontract scope for its design, the programme, the activity schedule or bill of quantities and the tendered total of the prices. The subcontract completion date may be stated by the contractor in part one or, where the contractor leaves this to the subcontractor, in part two. Although not part of the subcontract scope, subcontract data includes references to the documents that comprise the subcontract scope, site information, and pricing documents.

4.12 Z clauses – additional conditions of subcontract

Option Z clauses in the NEC4 ECS are drafted by the parties to address project-specific requirements not covered by the standard clauses. Strictly speaking, Z clauses are intended to be additional conditions, but in practice, they are also used for bespoke amendments. They are not part of the published subcontract and are used to reflect particular legal, commercial, or operational needs. Z clauses require careful drafting to avoid conflicts with existing NEC provisions or unintended legal consequences. Where the main contract has been amended by Z clauses, the contractor should consider whether corresponding changes are needed in the subcontract. Improper or excessive use of Z clauses can undermine the clarity and collaborative ethos of NEC contracts, thereby increasing the potential for disputes.

4.13 Activity schedule

The activity schedule is a pricing document used in NEC4 ECS options A and C that breaks down the subcontract works into discrete activities, each with an associated lump sum price. Under option A its primary purpose is to determine payments to the subcontractor based on the completion of these activities, making the schedule a key mechanism for managing cash flow and performance. Under option C the total of the prices on the activity schedule forms the target.

Information in the activity schedule is not subcontract scope or site information (clauses 55.1 and 55.2). Under option A, the activity schedule must relate to the subcontract scope and the subcontractor shows how each activity relates to the operations on the programme (clause 31.4). If

the subcontractor changes its planned method of working so that the activities no longer relate to the accepted programme, it submits a revised activity schedule for acceptance (clause 55.3).

4.14 Bill of quantities

The bill of quantities is the pricing document used under options B and D. Usually prepared by the contractor, it lists the items of work and their estimated quantities, measured using the method of measurement stated in the subcontract data. The subcontractor prices each item, and these prices form part of its tender. Information in the bill of quantities is not subcontract scope or site information (clause 56.1). Changes in quantities are a compensation event only in the limited circumstances set out in clauses 60.4 and 60.5, and the correction of mistakes in the bill of quantities is a compensation event (clause 60.6). It is particularly suited to subcontracts where the subcontract scope is well-defined and the design is largely complete at tender stage.

4.15 Programme

The programme is a vital management tool that sets out how and when the subcontractor intends to carry out the subcontract works. It serves as both a planning tool and a contractual record, enabling proactive risk management for both parties.

Because the subcontractor’s programme must show the order and timing of the work of the client, the contractor and others (clause 31.2), it also enables the contractor to integrate the subcontract works into its own programme under the main contract. The contractor uses the accepted programme to assess the impact of changes on time, including delays or acceleration. A well-maintained programme is essential for effective contract management and achieving project objectives.

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5.0 General provisions

5.1 Actions

Clause 10.1 requires the parties, being the contractor and the subcontractor, to act as stated in the subcontract, thereby establishing that all stated duties are contractual obligations. Unlike the NEC4 ECC, there is no project manager or supervisor under the subcontract and so the obligation applies only to the parties. Core clause 10.2 then provides that the parties act in a spirit of mutual trust and co-operation. Complying with this obligation supports proactive, collaborative management processes within the NEC4 ECS but does not alter the specific rights, responsibilities, or liabilities set out elsewhere in the subcontract.

The obligation is reinforced elsewhere in the subcontract. Subsubcontract documents must include a statement that the parties to the subsubcontract act in a spirit of mutual trust and co-operation (clause 26.3), and the contractor does not transfer the benefit of the subcontract to a party that does not intend to act in this spirit (clause 28.1).

5.2 Communications

Core clause 13 sets out the mandatory requirements for all communications under the subcontract and links them to the operation of the management processes. Communications must be in a form that can be read, copied and recorded and are written in the language of the subcontract (clause 13.1).

Where the subcontract scope specifies a communication system, a communication only has effect when issued through that system; otherwise, it takes effect on receipt at the last notified address or, if none is notified, the address stated in the subcontract data (clause 13.2). Replies required by the subcontract are given within the period for reply (clause 13.3). Subcontract data part one states separate periods for reply for the contractor and the subcontractor and different periods may be stated for particular matters. The contractor may extend the period for reply if the parties agree before the reply is due (clause 13.5).

Where the contractor does not accept a submission, it states its reasons and the subcontractor resubmits within the period for reply (clause 13.4). The contractor issues certificates to the subcontractor (clause 13.6), and notifications and certificates are communicated separately from other communications (clause 13.7). Withholding acceptance for a reason stated in the subcontract is not a compensation event (clause 13.8).

5.3 The contractor’s role in the subcontract

In the NEC4 ECC, the contract is administered by the project manager and the supervisor appointed by the client. The NEC4 ECS does not provide for either role. Instead, the contractor carries out the actions which the project manager and the supervisor carry out under the main contract. These include issuing instructions, accepting the subcontractor’s programme and other submissions, managing early warnings, assessing and implementing compensation events, assessing and certifying payments, certifying completion and take over, carrying out tests and inspections, notifying defects and issuing the defects certificate.

As the contractor is both a party to the subcontract and its administrator, its decisions should be made objectively and in accordance with the subcontract, consistent with the obligation to act in a spirit of mutual trust and co-operation (clause 10.2).

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Acceptance by the contractor of a communication from the subcontractor or of the work does not change the subcontractor's responsibility to provide the subcontract works or its liability for its design (clause 14.1).

The contractor has the authority to give an instruction which changes the subcontract scope or a key date (clause 14.3), and the subcontractor obeys an instruction which is in accordance with the subcontract and is given by the contractor (clause 27.3).

The project manager and the supervisor in the main contract are identified in subcontract data part one. Although they have no role in administering the subcontract, the subcontractor provides them with access to work being done and to plant and materials being stored for the subcontract (clause 27.2), the supervisor may watch any test done by the subcontractor (clause 41.3) and, under options C, D and E, the project manager may inspect the subcontractor's accounts and records (clause 52.3).

5.4 Early warnings

The subcontractor and the contractor are required to give an early warning as soon as either becomes aware of any matter which could increase the total of the prices, delay completion or meeting a key date, or impair the performance of the subcontract works in use. Either may also give an early warning of any other matter which could increase the subcontractor's total cost (clause 15.1). The contractor enters early warning matters in the early warning register, which also includes the matters listed in the subcontract data by each party (clause 11.2(6)).

The contractor issues the first early warning register within one week of the subcontract starting date and instructs the subcontractor to attend a first early warning meeting within two weeks of the subcontract starting date. Importantly, the contractor may instruct the subcontractor to attend an early warning meeting between the project manager and the contractor if an early warning matter under the main contract also affects the subcontract (clause 15.2).

At the meeting, those attending co-operate in seeking solutions to the matters in the register, decide the actions to be taken and who will take them, and decide which matters can be removed from the register (clause 15.3). The contractor issues the revised early warning register within one week of the meeting (clause 15.4).

A failure by the subcontractor to give an early warning which an experienced subcontractor could have given may reduce its entitlement under a related compensation event (clauses 61.5 and 63.7).

5.5 Subcontractor's proposals

Clause 16.1 allows the subcontractor to propose changes to the subcontract scope provided by the contractor in order to reduce the amount the contractor pays for providing the subcontract works. The contractor consults with the project manager, the client and the subcontractor about the change, reflecting the fact that such a change may also affect the main contract. Within five weeks of the proposal, the contractor either

- accepts the proposal and issues an instruction changing the subcontract scope,
- informs the subcontractor that the contractor or client is considering the proposal and instructs it to submit a quotation for a proposed instruction to change the subcontract scope, or
- informs the subcontractor that the proposal is not accepted (clause 16.2).

The contractor may give any reason for not accepting the proposal. Any actual savings are shared in accordance with the provisions stated in the relevant main option. Under options A and B, the prices are reduced by the value engineering percentage (50% unless another percentage is stated in the

subcontract data) of the assessed saving (A/B 63.12). Under options C and D the prices are not reduced (C/D 63.13) and the subcontractor benefits through the subcontractor's share.

5.6 Ambiguities and inconsistencies

Clause 17.1 requires the contractor and the subcontractor to notify each other as soon as either becomes aware of any ambiguity or inconsistency in or between the documents which are part of the subcontract. Following the notification, the contractor states how the matter should be resolved. Where this requires a change to the subcontract scope, the contractor gives an instruction (clause 14.3), which is assessed as if the prices, the subcontract completion date and the key dates were for the interpretation most favourable to the party which did not provide the subcontract scope (clause 63.10).

Clause 17.2 similarly requires the parties to notify each other if the subcontract scope includes an illegal or impossible requirement. If it does, the contractor gives an instruction to change the subcontract scope appropriately.

5.7 Prevention

Clause 19.1 describes a prevention event. It applies where an event stops the subcontractor completing the whole of the subcontract works or stops it completing them by the date for planned completion shown on the accepted programme. The event must be one which neither party could prevent and which an experienced subcontractor would have judged at the subcontract date to have such a small chance of occurring that it would have been unreasonable to have allowed for it.

In such circumstances, the contractor gives an instruction stating how the event is to be dealt with, taking control of the contractual response. A qualifying prevention event is a compensation event (clause 60.1(19)), and may give the contractor a right to terminate under reason R21 if it is forecast to delay completion by more than 13 weeks (clause 91.7). Where the same event also affects the works under the main contract, the contractor will need to manage it under both contracts.

6.0 The subcontractor's main responsibilities

6.1 Compliance with the subcontract scope

Clause 20.1 imposes a primary obligation on the subcontractor to deliver its part of the project by requiring that it provides the subcontract works in accordance with the subcontract scope. To provide the subcontract works means to do the work necessary to complete the subcontract works in accordance with the subcontract and all incidental work, services and actions which the subcontract requires (clause 11.2(13)).

Under the cost-based options C, D and E, the subcontractor also advises the contractor on the practical implications of the design of the subcontract works and on subsubcontracting arrangements (clause 20.2). It prepares forecasts of the total defined cost for the whole of the subcontract works at the intervals stated in the subcontract data, explaining the changes made since the previous forecast (clause 20.3).

6.2 Subcontractor's design

Clause 21.1 states that the subcontractor designs the parts of the subcontract works which the subcontract scope states it is to design. The subcontractor submits the particulars of its design to the contractor for acceptance, as required by the subcontract scope, and does not proceed with the relevant work until acceptance has been given (clause 21.2). A reason for not accepting the design is that it does not comply with the subcontract scope or the applicable law. The design may be submitted in parts if each part can be assessed fully (clause 21.3). The subcontractor also obtains approval of its design from others where necessary (clause 27.1).

Clause 23.1 deals with the design of equipment (temporary works). Submission of these designs to the contractor is triggered by an instruction from the contractor.

6.3 Working with the contractor and others

Clause 25.1 requires the subcontractor to co-operate with others, including in obtaining and providing the information they need in connection with the subcontract works, and to share the working areas with others as stated in the subcontract scope.

Clause 25.2 provides that both the contractor and the subcontractor provide the services and other things stated in the subcontract scope. If the subcontractor fails to provide what it is required to provide, the contractor assesses the resulting cost to it and this is paid by the subcontractor, whereas failure by the contractor is dealt with as a compensation event (clause 60.1(3)).

Clause 25.3 makes the subcontractor liable for the additional cost the contractor incurs if the work does not meet the condition for a key date by the date stated. This includes additional cost incurred in carrying out work and additional amounts the contractor pays to the client or others in carrying out work on the same project. The contractor assesses the additional cost within five weeks of the date when the condition is met, and this recovery is the contractor's only right in those circumstances.

6.4 Subsubcontracting

Under clause 26.1, the subcontractor remains responsible for providing the subcontract works as if it had not subsubcontracted, and the subcontract applies as if a subsubcontractor's employees and equipment were those of the subcontractor.

Clause 26.2 requires the subcontractor to submit the name of each proposed subsubcontractor to the contractor for acceptance. A reason for not accepting the proposed subsubcontractor is that its appointment will not allow the subcontractor to provide the subcontract works. The subcontractor does

not appoint a proposed subsubcontractor until the contractor has accepted the subsubcontractor and, where required, the subsubcontract documents. Appointing a subsubcontractor for substantial work before the contractor has accepted it is a reason for termination (clause 91.2).

Clause 26.3 requires the subcontractor to submit the proposed subsubcontract documents, except any pricing information, to the contractor for acceptance. A reason for not accepting the documents is that their use will not allow the subcontractor to provide the subcontract works or that they do not include a statement that the parties act in a spirit of mutual trust and co-operation.

The cost-based subcontracts of main options C, D and E also require the subcontractor to submit the pricing information in the proposed subsubcontract documents to the contractor, unless the contractor has agreed that no submission is required (clause 26.4).

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7.0 Time and the accepted programme

7.1 Starting, completion and key dates

Core clause 30 sets out the time framework for starting the subcontract works, achieving completion and meeting any key dates. The subcontractor does not start work on the site until the first subcontract access date and is required to do the work so that completion is on or before the subcontract completion date (clause 30.1). The contractor decides the date of completion and certifies it within one week of that date (clause 30.2).

The contractor allows access to and use of each part of the site necessary for the subcontract work on or before the later of its subcontract access date and the date for access shown on the accepted programme (clause 33.1). Failure to do so is a compensation event (clause 60.1(2)).

Where key dates are stated in the subcontract data, the subcontractor does the work so that the condition stated for each key date is met by the key date (clause 30.3).

7.2 The first programme and revised programmes

Clauses 31 and 32 establish the obligation to plan the subcontract works through an accepted programme and the process for keeping that programme up to date. If a programme is not identified in the subcontract data, the subcontractor submits a first programme to the contractor for acceptance within the period stated in the subcontract data (clause 31.1). If a programme is identified in the subcontract data, it is the accepted programme until superseded by a later accepted programme (clause 11.2(1)).

Clause 31.2 sets out the information each programme must show, including:

- the subcontract starting date, subcontract access dates, key dates, subcontract completion date and planned completion,
- the order and timing of the operations which the subcontractor plans to do and of the work of the client, the contractor and others,
- the dates when the subcontractor plans to meet each condition stated for the key dates and to complete work needed to allow the client, the contractor and others to do their work,
- provisions for float, time risk allowances, health and safety requirements and the procedures set out in the subcontract,
- the dates when the subcontractor will need access, acceptances, plant and materials and other things to be provided by the client and the contractor, and information from others, and
- for each operation, a statement of how the subcontractor plans to do the work, identifying the principal equipment and other resources.

Clause 31.3 requires the contractor to notify acceptance or non-acceptance, with reasons, within three weeks of the programme being submitted. If the contractor fails to respond, the subcontractor may notify the contractor of that failure and, if the failure continues for a further two weeks, the programme is treated as accepted.

Clause 32.1 requires each revised programme to show the actual progress achieved on each operation and its effect on the timing of the remaining work, and how the subcontractor plans to deal with any delays.

Clause 32.2 requires the subcontractor to submit a revised programme for acceptance within the period for reply after being instructed to, when it chooses to and, in any case, at no longer interval than that stated in the subcontract data.

7.3 Ownership of float, time risk allowances and terminal float

Float
Float, although not defined by the NEC4 ECS, represents spare time available for use in the programme before planned completion is affected. Float is shared between the contractor and the subcontractor and is available to absorb the subcontractor's own delays (subcontractor risk) and the effect of compensation events (contractor risk), whichever occurs first.

Time risk allowances
Time risk allowances cover the subcontractor's risks under the subcontract and are included with the duration of the operations shown on the programme. Time risk allowances are retained by the subcontractor when assessing the time effects of compensation events.

Terminal float
The period between planned completion and the subcontract completion date is commonly called terminal float and is effectively owned by the subcontractor by virtue of the assessment rule for compensation events as set out in clause 63.5.

7.4 Take over

Clause 35 deals with the contractor taking over the subcontract works. The contractor need not take over the subcontract works before the subcontract completion date if subcontract data part one states that it is not willing to do so. Otherwise, it takes over the subcontract works not later than two weeks after completion (clause 35.1).

The client or the contractor may use any part of the subcontract works before completion has been certified. The contractor takes over that part when the client or the contractor begins to use it, unless the use is for a reason stated in the subcontract scope or to suit the subcontractor's method of working (clause 35.2). The contractor certifies the date of take over and its extent within one week of the date (clause 35.3).

If the contractor certifies take over of a part of the subcontract works before both completion and the subcontract completion date, the matter is treated as a compensation event (clause 60.1(15)).

7.5 Acceleration

Core clause 36 outlines a process for agreeing an earlier subcontract completion date. Either the subcontractor or the contractor may propose an acceleration. If both are prepared to consider the change, the subcontractor provides a quotation within two weeks of the contractor's instruction, and the contractor replies within four weeks (clause 36.1).

Once the contractor accepts the quotation, it changes the prices, the subcontract completion date and the key dates and accepts the revised programme (clause 36.3). Where the acceleration forms part of an acceleration being agreed under the main contract, the contractor will need to co-ordinate the two processes. Agreements to bring forward the subcontract completion date under clause 36 are not compensation events.

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8.0 Quality Management

8.1 Quality management system

Clause 40.1 requires the subcontractor to operate a quality management system which complies with the requirements stated in the subcontract scope. Within the period stated in the subcontract data, the subcontractor provides the contractor with a quality policy statement and a quality plan for acceptance, and resubmits the quality plan whenever it is changed (clause 40.2). The contractor may instruct the subcontractor to correct a failure to comply with the quality plan, and this instruction is not a compensation event (clause 40.3).

8.2 Tests and inspections

The procedure for carrying out tests and inspections to confirm that the subcontract works comply with the subcontract scope is set out in core clause 41, which applies only to tests and inspections required by the subcontract scope or the applicable law (clause 41.1). The subcontractor and the contractor provide materials, facilities and samples for tests and inspections as stated in the subcontract scope (clause 41.2).

The subcontractor and the contractor are required to inform each other of each of their tests and inspections before they start and to inform the other of the results. The contractor and the supervisor may watch any test done by the subcontractor (clause 41.3).

If a test or inspection shows that any work has a defect, the subcontractor corrects the defect, and the test or inspection is repeated (clause 41.4). The contractor assesses the cost it incurs in repeating the test or inspection and the subcontractor pays this amount (clause 41.6).

Clause 41.5 requires the contractor to carry out its tests and inspections without causing unnecessary delay to the work or to any payment that is conditional upon a test or inspection being successful.

8.3 Searching for and notifying of defects

The subcontractor is not obliged to search for defects unless the contractor instructs it to do so. Until the defects date, the contractor may instruct a search, giving its reason with the instruction (clause 43.1). If no defect is found, the instruction is treated as a compensation event, unless the search was needed only because the subcontractor gave insufficient notice of doing work obstructing a required test or inspection (clause 60.1(10)).

Clause 43.2 deals with the identification of defects by requiring the contractor and the subcontractor to notify the other as soon as they become aware of a defect until the defects date.

8.4 Correcting defects

Clauses 44.1 to 44.4 set out the subcontractor’s obligation to correct defects. The subcontractor corrects a defect whether or not the contractor has notified it (clause 44.1) and corrects a notified defect before the end of the defect correction period. The defect correction period begins at completion for defects notified before completion and when the defect is notified for other defects (clause 44.2).

The contractor is responsible for issuing the defects certificate. It is issued at the defects date if there are no notified defects or otherwise at the earlier of the end of the last defect correction period and the date when all notified defects have been corrected (clause 44.3). If access to a part of the subcontract works which has been taken over is required for the subcontractor to correct a defect, the contractor

arranges for the client and the contractor to allow access and use, and the defect correction period begins when this has been provided (clause 44.4).

8.5 Accepting defects

Clause 45 provides the mechanism for accepting a defect instead of requiring it to be corrected. Either the subcontractor or the contractor may propose that the subcontract scope should be changed so that a defect does not have to be corrected (clause 45.1). If both are prepared to consider the change, the subcontractor submits a quotation for reduced prices, an earlier subcontract completion date, or both. If the quotation is accepted, the contractor changes the subcontract scope, the prices and the subcontract completion date accordingly and accepts the revised programme (clause 45.2).

As the subcontract works will usually form part of the works under the main contract, the contractor will need to consider whether the defect is also acceptable under the main contract before agreeing to the change.

8.6 Uncorrected defects

Core clause 46 covers the circumstances where notified defects are not corrected. If the subcontractor is given access to correct a notified defect but does not correct it within its defect correction period, the contractor assesses the cost to it of having the defect corrected by other people and the subcontractor pays this amount (clause 46.1). If the subcontractor is not given access to correct a notified defect before the defects date, the contractor assesses the cost to the subcontractor of correcting the defect and the subcontractor pays this amount (clause 46.2). In both cases the subcontract scope is treated as having been changed to accept the defect.

Where secondary option X17 applies, the subcontractor also pays low performance damages if a defect included in the defects certificate shows low performance with respect to a performance level stated in the subcontract data (X17.1).

9.0 Payment and the main options

9.1 Assessing the amount due

The process by which the amount due is assessed at each assessment date is set out in clause 50.1. The first assessment date is decided by the contractor to suit the procedures of the parties and is not later than the assessment interval after the subcontract starting date. Later assessment dates occur at the end of each assessment interval stated in the subcontract data until the contractor issues the defects certificate or a termination certificate. It is a payee-led process, and assessments are carried out by the contractor.

The subcontractor submits an application for payment before each assessment date, setting out the amount it considers due and how it has been assessed, in the form stated in the subcontract scope (clause 50.2). The contractor considers the application but makes its own assessment. Where an application has been submitted, the amount due is the price for work done to date plus other amounts to be paid to the subcontractor, less amounts to be paid by or retained from the subcontractor (clause 50.3). Assessment of the price for work done to date depends on the main option.

Clause 50.4 provides a strong incentive for the subcontractor to submit an application. If it does not submit an application before the assessment date, the amount due is the lesser of the amount the contractor assesses as due and the amount due at the previous assessment date.

Clause 50.5 states that, if no programme is identified in the subcontract data, one quarter of the price for work done to date is retained in assessing the amount due until the subcontractor has submitted its first programme for acceptance, showing the information the subcontract requires.

Clause 50.6 requires the contractor to correct any incorrectly assessed amount due in a later payment certificate. Interest is then due on the correcting amount where the correction relates to a mistake or a compensation event, a payment delayed by an unnecessary delay to a contractor’s test or inspection, or a decision of the adjudicator or the tribunal (clause 51.3).

9.2 Payment

The rules and procedures for certifying and making payment are set out in clause 51. This part of the subcontract should be read together with the provisions of Y(UK)2, where the secondary option applies.

The contractor certifies a payment within two weeks of each assessment date, including details of how the amount due has been assessed. The first payment is the amount due and each subsequent payment is the change in the amount due since the previous assessment. If the change reduces the amount due, the payment is made by the subcontractor to the contractor (clause 51.1). Each certified payment is made within four weeks of the assessment date or, if a different period is stated in the subcontract data, within that period (clause 51.2). These periods are each one week longer than the corresponding periods for certification and payment in the NEC4 ECC.

Payments are made in the currency of the subcontract unless otherwise stated (clause 51.1). Interest is payable on late payment, including where the contractor has not issued a certificate which it should have issued (clause 51.2). Interest is calculated on a daily basis at the interest rate stated in the subcontract data and is compounded annually (clause 51.4).

Where option Y(UK)2 applies, a payment becomes due 14 days after the assessment date and the final date for payment is 14 days after the due date, unless a different period is stated in the subcontract data. The contractor’s certificate is the notice of payment. If either party intends to pay

less than the notified sum, it must notify the other party not later than seven days before the final date for payment (Y2.2 and Y2.3).

9.3 Final assessment

The contractor is required to assess the final amount due and certify a final payment, if any is due, no later than four weeks after it issues the defects certificate or 14 weeks after it issues a termination certificate. The assessment must show how the final amount has been calculated and any final payment is made within three weeks of the assessment, or within a different period if stated in the subcontract data (clause 53.1).

If the contractor does not make this assessment within the required time, the subcontractor may issue its own assessment of the final amount due to the contractor. If the contractor agrees with it, the final payment is made within three weeks of the assessment (clause 53.2).

An assessment issued within the time stated becomes conclusive evidence of the final amount due unless it is challenged through the dispute resolution procedure within the contractual timescales. Under option W1 a dispute about the assessment is referred to the senior representatives within four weeks of the assessment being issued, and under option W2 it is referred to the senior representatives or to the adjudicator within four weeks (clause 53.3).

9.4 Defined cost

Defined cost is a term which varies depending on the main option. Defined cost is the assessment basis for compensation events and for the cost-based main options.

Under options C, D and E, defined cost is the cost of the components in the schedule of cost components less disallowed cost, and the price for work done to date is the total defined cost which the contractor forecasts will have been paid by the subcontractor before the next assessment date plus the fee.

For main options A and B, defined cost is used only for the assessment of compensation events in accordance with the short schedule of cost components.

Clause 52.1 provides that all the subcontractor’s costs which are not included in defined cost are treated as included in the fee.

Under options C, D and E the subcontractor keeps accounts of payments of defined cost, proof that the payments have been made, communications about and assessments of compensation events for subsubcontractors and other records stated in the subcontract scope (clause 52.2). The contractor and the project manager may inspect these records at any time within working hours (clause 52.3).

9.5 Disallowed cost

Disallowed cost is a cost the subcontractor has incurred but the subcontract does not allow to be included in the defined cost, and therefore the contractor does not pay it. The items of cost which are disallowed are listed in clause 11.2(25). They include cost which is not justified by the subcontractor’s accounts and records, which should not have been paid to a subsubcontractor or supplier, or which was incurred only because the subcontractor did not follow an acceptance or procurement procedure stated in the subcontract scope or give a required early warning. Disallowed cost applies only to the cost-based subcontracts of main options C, D and E. It does not apply to options A and B.

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9.6 The subcontractor's share

Under the target subcontracts of options C and D, the contractor assesses the subcontractor's share of the difference between the total of the prices (the target) and the price for work done to date (clause 54). The difference is divided into increments falling within the share ranges stated in subcontract data part one, and the subcontractor's share percentage for each range is applied. If the price for work done to date is less than the total of the prices, the subcontractor is paid its share of the saving. If it is greater, the subcontractor pays its share of the excess.

The contractor makes a preliminary assessment of the subcontractor's share at completion of the whole of the subcontract works using forecasts of the final figures, and this is included in the amount due following completion. A final assessment is included in the final amount due.

9.7 Schedule of cost components

The schedule of cost components is used with the cost-based subcontracts (options C, D and E) to define which costs the subcontractor is reimbursed for and to assess the value of compensation events. An amount is included only in one cost component and only if it is incurred in order to provide the subcontract works. The schedule comprises eight components of cost:

1. People
2. Equipment
3. Plant and materials
4. Subsubcontractors
5. Charges
6. Manufacture and fabrication
7. Design
8. Insurance

9.8 Short schedule of cost components

The short schedule of cost components is used with the priced subcontracts (options A and B) to assess the value of compensation events only. The short schedule also has eight cost components, but the coverage differs from that of the "long" schedule. For example, the cost of people is calculated using the people rates stated in subcontract data part two. If the people rates do not include a rate for a category of person required, the contractor and the subcontractor may agree a new rate; otherwise the contractor assesses it based upon the people rates (clause 63.16).

10.0 Compensation events

10.1 General

Compensation events are events that, provided they do not arise from the subcontractor's fault, give the subcontractor an entitlement to be compensated. Compensation events are assessed for their effect on both time and money. This means the prices, the subcontract completion date, and any key dates included in the subcontract are reassessed. The rights to changes to the prices, the subcontract completion date and the key dates are the parties' only rights in respect of a compensation event (clause 63.6).

Compensation events are covered by core clause 6 of the NEC4 ECS and are divided into seven sub-clauses:

- A list of compensation events (clause 60)
- Notification (clause 61)
- Quotations (clause 62)
- Assessments (clause 63)
- Contractor's assessments (clause 64)
- Proposed instructions (clause 65)
- Implementation (clause 66)

10.2 Compensation events

Core clause 60.1 sets out 21 events which entitle the subcontractor to a change to the prices, the subcontract completion date and any key dates when they arise and are not the subcontractor's fault. The list includes matters such as instructed changes to the subcontract scope, failure by the contractor to provide access, to provide something it is to provide or to reply to a communication within the required period, and instructions to stop or not to start work. Notably, the client is included alongside the contractor and others where they do not work within the times shown on the accepted programme or the conditions stated in the subcontract scope (clause 60.1(5)).

The clause further transfers to the contractor the risk of physical conditions within the site which an experienced subcontractor would have judged at the subcontract date to have such a small chance of occurring that it would have been unreasonable to have allowed for them (clause 60.1(12)), and of weather which, measured at the place stated in the subcontract data and compared with the weather data, occurs on average less frequently than once in ten years (clause 60.1(13)). Finally, it allows additional compensation events to be stated in subcontract data part one, ensuring the risk profile can be tailored to the specific subcontract and aligned with the main contract.

Compensation events are also found in:

- Main options B and D (clauses 60.4 to 60.7)
- Changes in the law (X2.1)
- Multiparty collaboration (X12.3(6) and (7))
- Advanced payment to the subcontractor (X14.2)
- The subcontractor's design (X15.2)
- Suspension of performance (Y2.5)

10.3 Notifying compensation events

Where a compensation event arises from the contractor giving an instruction or notification, issuing a certificate or changing an earlier decision, the contractor is required to notify the subcontractor at the time of that communication (clause 61.1) and, unless the event arises from a fault of the

subcontractor or has no effect on defined cost, completion or meeting a key date, instructs the subcontractor to submit quotations (clause 61.2).

For all other events, the subcontractor must notify the contractor if it believes a compensation event has occurred and it has not already been notified. This notification must be given within seven weeks of the subcontractor becoming aware of the event, otherwise there is no change to the prices, the subcontract completion date or a key date, unless the event arises from the contractor giving an instruction or notification, issuing a certificate or changing an earlier decision (clause 61.3). This period is one week shorter than the eight weeks allowed in the NEC4 ECC, which assists the contractor in notifying any related event under the main contract in time.

The contractor is required to reply to the subcontractor's notification within two weeks, or a longer period to which the subcontractor has agreed. The reply either confirms that the event is a compensation event and instructs quotations, or notifies that the prices, the subcontract completion date and the key dates are not to be changed, with reasons. If the contractor fails to respond, the subcontractor may notify that failure and, if it continues for a further three weeks, it is treated as acceptance that the event is a compensation event and an instruction to submit quotations (clause 61.4). Compensation events are not notified after the defects certificate has been issued (clause 61.7).

10.4 Quotations and assessments

After discussing different practicable ways of dealing with the event, the contractor may instruct the subcontractor to submit alternative quotations (clause 62.1). Quotations comprise proposed changes to the prices and any delay to the subcontract completion date and key dates, with details of the assessment and any alterations to the accepted programme (clause 62.2). The subcontractor is required to submit quotations within two weeks and the contractor replies within four weeks by accepting, instructing a revised quotation or notifying that it will make the assessment (clause 62.3). If the contractor fails to reply and the subcontractor gives a further notification, the quotation is treated as accepted if the failure continues for a further three weeks (clause 62.6).

Clause 63.1 provides that changes to the prices are assessed as the effect of the compensation event on the actual defined cost of work done by the dividing date, the forecast defined cost of work not done by that date, and the resulting fee. Rates or lump sums may be used by agreement (clause 63.2). Price reductions occur only in limited circumstances (clauses 63.3 and 63.4). Time effects are assessed by the delay to planned completion shown on the accepted programme current at the dividing date (clause 63.5).

10.5 Contractor's assessments

Core clause 64 sets out when the contractor makes the assessment of a compensation event instead of accepting a subcontractor's quotation and establishes the time limits and consequences of failing to do so. The contractor carries out the assessment where

- the subcontractor has not submitted a quotation and details of its assessment within the time allowed,
- the contractor decides that the subcontractor has not assessed the compensation event correctly and has not instructed a revised quotation,
- the subcontractor has not submitted a programme or alterations to a programme which the subcontract requires it to submit, or
- the contractor has not accepted the subcontractor's latest programme for one of the reasons stated in the subcontract.

The contractor also assesses the programme for the remaining work and uses it in the assessment if there is no accepted programme or the subcontractor's latest programme has not been submitted or accepted as the subcontract requires (clause 64.2). If the contractor does not notify its assessment in time (clause 64.3), the subcontractor may notify the failure and, if it continues for a further three weeks, the subcontractor's quotation is treated as accepted (clause 64.4).

10.6 Proposed instructions

Core clause 65 provides a mechanism for the contractor to obtain a prospective assessment of the cost and time effect of a possible instruction before deciding whether to issue it. The contractor may instruct the subcontractor to submit a quotation for a proposed instruction and states the date by which the instruction may be given. Until an instruction is actually issued, the subcontractor does not put the proposed instruction into effect.

The subcontractor submits the quotation within two weeks, and it is assessed in the same way as a compensation event. If no reply is given within that period, the quotation is treated as not accepted.

Where the quotation is not accepted, but the contractor later decides to proceed, the instruction is issued, notified as a compensation event, and the normal compensation event procedure for obtaining a quotation then applies (clause 65.3).

10.7 Implementation

Implementation occurs when

- the contractor notifies acceptance of the subcontractor's quotation,
- the contractor notifies the subcontractor of its own assessment, or
- a subcontractor's quotation is treated as having been accepted by the contractor.

At the point of implementation the compensation event is closed and its effect is incorporated into the subcontract by changing the prices, the subcontract completion date and any affected key dates (clause 66.2). In main options A and C the changed prices are built into the activity schedule (clause 63.14), and in options B and D into the bill of quantities (clause 63.15), so they can be taken into account in subsequent assessments for payment. Once implemented, the assessment of a compensation event is not revised except as stated in the subcontract (clause 66.3).

11.0 Title and Intellectual Property Rights

11.1 Plant and materials outside the working areas

Clause 70.1 states: 'Whatever title the subcontractor has to plant and materials which are outside the working areas passes to the contractor if the contractor has marked them as for the subcontract.' Clause 70.1 mirrors the position in English law that title cannot be transferred from the subcontractor to the contractor if the subcontractor does not have good title – see Sale of Goods Act 1979 s 21(1) and Supply of Goods and Services Act 1982 s 2. Title is transferred upon the action of marking by the contractor and not by payment. Title passes to the contractor rather than to the client, with the onward transfer of title to the client being a matter for the main contract.

The obligation on the contractor to mark plant and materials (and equipment) only arises once two conditions are satisfied. Firstly, that the subcontract identifies them for payment and secondly, the subcontractor has prepared them for marking as required by the subcontract scope (clause 71.1).

Clause 70.2, which also operates as a vesting clause, states: 'Whatever title the subcontractor has to plant and materials passes to the contractor if they have been brought within the working areas. The title to plant and materials passes back to the subcontractor if they are removed from the working areas with the contractor's permission.' As with clause 70.1, title passes without payment, but only if the subcontractor has good title in the first place.

11.2 The subcontractor's use of material provided by the contractor or client

Clause 74.1 restricts the subcontractor's use of any material provided by the contractor or the client solely to providing the subcontract works. The subcontractor may, however, make this right available to its subsubcontractors. The limitation on use means the subcontractor cannot use the contractor's or the client's designs or data provided in the subcontract scope for unrelated work or other contracts. This restriction includes drawings or information provided in the site information.

11.3 Client's and contractor's use and ownership of the subcontractor's design

Clause 22.1 gives the client and the contractor the right to use and copy the subcontractor's design and documents prepared for the design 'for any purpose connected with construction, use, alteration or demolition of the subcontract works or the works in the main contract unless otherwise stated in the subcontract scope'. Extending the right to the works in the main contract reflects the fact that the subcontract works will usually form part of a larger project. The right does not extend to using the subcontractor's design for another project in a different location. The subcontractor is also required to obtain equivalent rights for the contractor and the client from its subsubcontractors.

Under English law, the initial copyright of material is owned by its author. However, if secondary option X9 is included, the contractor owns the subcontractor's rights over material prepared for the design of the subcontract works, except as stated otherwise in the subcontract scope, and may transfer these rights to the client. X9 also requires the subcontractor to obtain equivalent rights from its subsubcontractors and to provide the documents which transfer these rights. Where option X10 applies, the client owns the information model and the subcontractor's rights over project information, except as stated otherwise in the information model requirements (X10.6).

11.4 Subcontractor's use of its own material

Secondary option clause X15.3 allows the subcontractor to use the material it provides under the subcontract for other work unless ownership has been given to the contractor, or it is stated to the contrary in the subcontract scope.

12.0 Liabilities and Insurance

12.1 Liabilities

Liability for risk is allocated between the parties under core clause 8. Clause 80.1 lists the client's and contractor's liabilities, recognising that some of the risks borne on the contracting side of the subcontract will sit with the client under the main contract. They include:

- Claims and proceedings from others due to the unavoidable use or occupation of the site by the works, or due to negligence, breach of statutory duty or interference with a legal right by the client or the contractor
- A fault of the client or the contractor or any person employed by or contracted to them, except the subcontractor
- A fault in the design contained in the subcontract scope provided by the contractor or in an instruction changing it
- Loss of or damage to
  - Plant and materials supplied by the client or the contractor until the subcontractor has received and accepted them,
  - the subcontract works, plant and materials due to war, strikes, riots and radioactive contamination,
  - parts of the subcontract works taken over by the contractor, and after termination, and
  - property owned or occupied by the client or the contractor, other than the subcontract works, unless it arises from the subcontractor providing the subcontract works
- Additional client's or contractor's liabilities stated in the subcontract data

Following the approach of the NEC4 ECC, clause 81.1 of the NEC4 ECS specifies four events for which the subcontractor is liable, unless they are stated as client's or contractor's liabilities: claims and proceedings from others arising from the subcontractor providing the subcontract works; loss of or damage to the subcontract works, plant and materials and equipment; loss of or damage to the client's or contractor's property arising from the subcontractor providing the subcontract works; and death or bodily injury to the subcontractor's employees.

Clause 82 deals with the recovery of costs between the parties. Any cost which the contractor has paid or will pay as a result of an event for which the subcontractor is liable is paid by the subcontractor (clause 82.1), and any cost which the subcontractor has paid or will pay to others as a result of an event for which the contractor or the client is liable is paid by the contractor (clause 82.2). A party's right to recover is reduced in proportion to the extent that an event for which it was liable contributed to the costs (clause 82.3).

12.2 Insurance

The default position under the NEC4 ECS is that the subcontractor provides the insurances stated in the insurance table, except any insurance which the client or the contractor is to provide as stated in the subcontract data, together with any additional insurances stated in the subcontract data (clause 83.2). The client or the contractor provides the insurances which the subcontract data states it is to provide (clause 83.1). This allows insurances already arranged under the main contract, for example for the works, to be identified in the subcontract data rather than duplicated. Insurance is required to be in place from the subcontract starting date and, with the exception of professional indemnity insurance (X15.5), the obligation to be insured ceases when the defects certificate or a termination certificate has been issued (clause 83.3).

The insurance table in clause 83.3 lists four events against which the subcontractor is to insure with a minimum amount of cover. These are loss of or damage to the subcontract works, plant and materials;

loss of or damage to equipment; loss of or damage to property and liability for bodily injury to or death of a person who is not an employee of the subcontractor; and death of or bodily injury to the subcontractor's employees. The fourth event, in the UK, is required by law.

The subcontractor submits certificates stating that the required insurance is in force to the contractor for acceptance before the subcontract starting date and on each renewal until the defects date. The contractor accepts the certificates if the insurance complies with the subcontract and if the insurer's commercial position is strong enough to carry the insured liabilities (clause 84.1). If the subcontractor does not submit a required certificate, the contractor may insure the event or liability and recover the cost from the subcontractor (clause 85.1).

Where the client or the contractor is providing the insurance, the contractor submits the certificates to the subcontractor for acceptance before the subcontract starting date and afterwards as the subcontractor instructs (clause 86.1). The subcontractor's acceptance does not change the client's or the contractor's responsibility to provide the insurances (clause 86.2), and if a required certificate is not submitted, the subcontractor may insure and recover the cost from the contractor (clause 86.3).

12.3 Professional indemnity insurance

The NEC4 ECS core clauses do not require the subcontractor to insure against claims of negligence in its design. If secondary option X15 is chosen, the subcontractor is not liable for a defect arising from its design unless it failed to use 'the skill and care normally used by professionals designing works similar to the subcontract works' (X15.1). If the subcontractor corrects a defect for which it is not liable, this is a compensation event (X15.2).

X15.5 requires the subcontractor to take out professional indemnity insurance, for the minimum amount and the period stated in the subcontract data. Certificates are submitted to the contractor for acceptance before the subcontract starting date and on each renewal, both before and after the defects date, until the end of the stated period (X15.6). If secondary option X15 is not included in the subcontract, it is advisable that additional insurance for professional indemnity is stated by the contractor in subcontract data part one.

12.4 Co-insurance

With the exception of the insurance for death of or bodily injury to the subcontractor's employees, the NEC4 ECS requires the insurances in the insurance table to be in the joint names of the parties (clause 83.3) and the policies to include a waiver by the insurers of their subrogation rights against the parties and the directors and other employees of every insured, except where there is fraud (clause 84.2). Subrogation is the act of the insurer stepping into the shoes of the assured with the intention of seeking damages from the party who is allegedly responsible for the loss or damage. A waiver of subrogation rights under a co-insured policy addresses the circuitry argument by preventing the insurer from making a claim against an insured party for the amount paid out to the other.

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13.0 Termination

Core clause 9 of the NEC4 ECS sets out the parties' rights and obligations on termination. This section of the subcontract comprises four parts:

- Termination (clause 90)
- Reasons for termination (clause 91)
- Procedures on termination (clause 92)
- Payment on termination (clause 93)

Termination is of the subcontractor's obligation to provide the subcontract works (clause 90.1). This approach is consistent with the common law doctrine 'the contract survives termination', meaning any rights and liabilities accrued under the subcontract remain.

A party wishing to terminate notifies the other party, giving details of the reason. The contractor issues a termination certificate promptly if the reason complies with the subcontract (clause 90.1), and after it has been issued the subcontractor does no further work necessary to provide the subcontract works (clause 90.4). The termination table in clause 90.2 sets out, for each reason, the procedures to be followed and the amounts due.

Either party may terminate for the insolvency-related reasons R1 to R10 (clause 91.1). The contractor may terminate where, following notification, the subcontractor has not put right within three weeks a substantial failure to comply with its obligations, a failure to provide a required bond or guarantee, or the appointment of a subsubcontractor for substantial work before acceptance (clause 91.2), or has not stopped substantially hindering the client, the contractor or others or substantially breaking a health or safety regulation (clause 91.3). The contractor may also terminate if the subcontractor does a corrupt act (clause 91.8) or for a prevention event forecast to delay completion by more than 13 weeks (clause 91.7). The subcontractor may terminate if the contractor has not paid an amount due within 13 weeks of the date it should have been paid (clause 91.4). Rights to terminate also arise where the parties have been released from performance under the law (clause 91.5) and where an instruction to stop or not to start substantial work has not been lifted within 14 weeks (clause 91.6).

Two termination rights reflect the subcontract's place in the supply chain. Firstly, the contractor may terminate if its own obligation in the main contract has been terminated (clause 91.9). In that case the subcontractor leaves the working areas and removes its equipment, and is paid the normal amount due on termination together with the forecast cost of removing equipment and the fee percentage applied to the unearned balance of the prices. Secondly, where option X11 applies, the contractor may terminate for a reason not identified in the termination table, with the same amounts due (X11.1 and X11.2).

On termination, the contractor may complete the subcontract works and use any plant and materials to which it has title (clause 92.1). The amount due on termination includes an amount assessed as for normal payments, the defined cost of plant and materials within the working areas or to which the contractor has title, other defined cost reasonably incurred in expectation of completing the subcontract works and any amounts retained, less any un-repaid advanced payment (clause 93.1). Where the contractor terminates for the subcontractor's insolvency or default (reasons R1 to R15, R18 or R22), a deduction is also made for the forecast additional cost to the contractor of completing the subcontract works (clause 93.2), and the contractor need not make a certified payment which has not been made at the date of the termination certificate, unless the subcontract states otherwise (clause 90.3 and Y2.4).

The termination process described in NEC4 ECS may appear straightforward, but in practice, it is complex and potentially contentious. Faced with the prospect of termination, contractors and subcontractors should both seek competent legal advice. They should always follow the subcontract and, in particular, any amendments. The contractor should also consider the effect of terminating the subcontract on its own obligations under the main contract.

14.0 Recommended reading list

- NEC4 User Guide: Volume 2 - Preparing an Engineering and Construction Contract (Thomas Telford, 2017)
- NEC4 User Guide: Volume 4 - Managing an Engineering and Construction Contract (Thomas Telford, 2017)
- Kelvin Hughes, Understanding the NEC4 ECC Contract: A Practical Handbook, 2nd edition (Routledge, 2024)
- Bronwyn Mitchell and Barry Trebes, Managing Reality, 3rd edition: Complete Set (ICE Publishing, 2017)
- Michael Rowlinson, A Practical Guide to the NEC4 Engineering and Construction Contract (Wiley Blackwell, 2018)
- Patrick Waterhouse, NEC4: Defined Cost and Compensation Events (ICE Publishing, 2021)
- Tim Willis, NEC4: Effective Preparation and Management of the Construction Programme (ICE Publishing, 2025)
- David Thomas KC (ed.), Keating on NEC, 2nd edition (Sweet & Maxwell, 2022)
- Brian Eggleston, The NEC4 Engineering and Construction Contract: A Commentary, 3rd edition (Wiley Blackwell, 2019)

About the author



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EXPERIENCE

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David is an NEC contract specialist. With over forty years of experience, he has a proven record in delivering complex projects with multiple stakeholders in both the public and private sectors. A professionally qualified and conscientious individual with an established career in civil engineering and construction, his projects include working in the infrastructure, transport, energy, education, leisure, manufacturing, and commercial industries.

David's experience with the NEC suite of contracts extends over a twenty-five-year period acting as Employer, NEC Project Manager and Contractor. A strong advocate of the NEC forms, David believes they provide an equitable means of procurement and managing risk in an effective and collaborative manner whilst working within a commercial environment. David has practical experience acting in the role of the NEC Project Manager and in 2015 was named 'NEC Project Manager of the Year' at the inaugural NEC awards.

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