# **Engineering and Construction Subcontract** (June 2005)



#### Introduction

The purpose of this Guidance Note is to provide members with an overview of the Engineering Construction Subcontract. It is not intended that this Guidance Note be comprehensive or a definitive interpretation of the contract. Members invited to submit tenders for work under this contract are advised to read the contract thoroughly and seek further clarification and training on its requirements before submitting a tender.

The Engineering Construction Contract was first published in 1993 and was known as the New Engineering Contract (NEC). The third edition, referred to as NEC3, was published in June 2005. It was originally a single contract for use between an employer and a contractor. It is now a family of contracts with versions covering all relationships in the construction process for e.g. between employers and their designers, employers and contractors and contractors and subcontractors. Subcontracts come in two versions – the long and short versions. This guidance note deals with the long version only.

Like the main contract it is intended that the subcontract be used in a wide variety of circumstances, avoiding the need to have separate documents for different contractual relationships and different types of construction work. The NEC3 Engineering and Subcontract forms can be used for building, civil engineering, mechanical and electrical work. The same form can be used when the subcontractor assumes the entire responsibility for design, partial responsibility or no responsibility. It can also be used in any part of the world and for all procurement methods including lump sum, target, cost reimbursable and management contracts.

Although the language is simple and straightforward the subcontract uses different words and gives them different meanings to those found in the more common forms currently in use. For example 'Plant' in other forms of contract may refer to excavators, dumpers, cranes and other types of construction machinery. In the NEC3 'Plant' refers to parts of mechanical and electrical systems incorporated into the building. Scaffolding equipment is referred to as 'Equipment' in NEC3.

For the sake of clarity 'member', that is to say a member of the NASC, has been used in place of the words 'scaffolder', 'subcontractor' or 'scaffolding subcontractor' etc.

## Structure of the Subcontract

Like the main contract the subcontract is divided into five sections:

- Section I Core Clauses
- Section 2 Main Option Clauses
- Section 3 Secondary Option clauses
- Section 4 Cost Components
- Section 5 Subcontract Data

#### Section I - Core Clauses

There are nine Core Clauses dealing with matters common to all subcontracts and are therefore included in all subcontracts. The nine clauses deal with the following matters:

- Clause I General matters definition of terms; communications; ambiguities
- Clause 2 Subcontractor responsibilities design
- Clause 3 Time completion; key dates; programmes; acceleration
- Clause 4 Testing and defects tests required by contract and law
- Clause 5 Payment assessment of amount due and payment mechanism
- Clause 6 Compensation events events giving rise to additional time and / or money
- Clause 7 Title ownership of materials (scaffolding equipment is not material)
- Clause 8 Risks and Insurance
- Clause 9 Termination reasons for and procedure

## Section 2 – Main Option Clauses

There are five main option clauses of which the main contractor may choose only one. The five options provide different methods of reimbursing the subcontractor:

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



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In the absence of a standard method of measurement for scaffolding work it is unlikely that Options B and D will be used. The most common option likely to be used is Option A, incorporating an Activity Schedule. The schedule needs to be more than just a list of scaffolds with prices. This is probably the best place for certain essential matters, peculiar to scaffolding, to be included in the contract. Because the payment mechanism in Option A works on the basis that activities will only be paid for when they are complete it is essential that large items are broken down into a number of smaller sub-items. For example a large independent scaffold, of 10 lifts, erected progressively may need to be itemised as ten separate activities of one lift each so that the lifts can be valued and paid for progressively. The price for each of the ten lifts will require breaking down further into erect and dismantle values. The hire periods included in each activity will need to be identified within each item together with extra hire rates and dates when scaffolds are on / off hire.

In addition to one of the above main option clauses the main contractor will choose a dispute resolution option, either W1 or W2.W2 is for use where English law is applicable and adjudication, under the Housing Grants, Construction and Regeneration Act 1996, is permitted. For all other jurisdictions W1 is applicable.

### Section 3 - Secondary Option Clauses

There are 18 secondary option clauses. The main contractor may choose any number of them to suit his contract strategy and the main option clause chosen. It is not necessary to choose any secondary option clauses. The secondary options are:

- Option XI Price adjustment for inflation (used with Options A, B, C or D)
- Option X2 Changes in the law
- Option X3 Multiple currencies (used with Options A or B)
- Option X4 Parent company guarantee
  Option X5 Sectional completion
- Option X6 Bonus for early completion
- Option X7 Delay damagesOption X12 Partnering
- Option X13 Performance bond
- Option X14 Advance payment to the subcontractor
- Option X15 Design responsibility limited to reasonable skill and care
- Option X16 Retention
- Option X17
  Option X18
  Option X20
  Limitation of liability
  Key performance indicators
- Option Y(UK)2 Housing Grants Construction and Regeneration Act 1996
- Option Y(UK)3 The Contracts (Rights of Third Parties) Act 1999
- Option Z Additional Conditions of Subcontract

Members need to scrutinise the Secondary Options chosen by their clients. Some may be of positive benefit to members while others may be a significant disadvantage. Beneficial options are X1 Price Fluctuations and X15 Limitation of Design Responsibility. Options to be viewed with caution are X7 Delay Damages, X16 Retention and XZ Additional Conditions of Subcontract. The former may make it easier for clients to recover damages for delay, which in other forms of contract would be difficult. It should also be noted that under the strict wording of the subcontract damages could be due if completion of erection is delayed. Any entry in Option Z should be reviewed carefully as this is where the imposition of significant risks could be included. Subject to which of the Secondary Options is chosen expert advice may be required.

# Section 4 - Schedule of Cost Components

The Schedule of Cost Components (SCC) comes in two formats – the Shorter SCC for use with Main Options A or B, and used solely for valuing compensation events, and the full SCC used with Options C, D or E for valuing interim payments and compensation events. Although, if the parties agree they can revert to the Shorter SCC for valuing compensation events under Options C, D or E.

The cost components included in both formats of the schedule are 'people' (labour), 'equipment' (scaffolding kit) and 'plant and materials' (not usually associated with scaffolding work).

The primary difference between the full SCC and the Shorter SCC is the treatment of subsubcontractors. In the full SCC subsubcontracted work is included as a separate element of cost but in the Shorter SCC subsubcontracted work is treated as the scaffolder's own work. However, scaffolders do not often subsubcontract any part of their work scope and little if any 'plant and materials' are supplied. The extent of the SCC, be it for the full or the shorter format, will be the same for scaffolding work. Labour only subsubcontractors would not be regarded as genuine subsubcontractors. A genuine subsubcontractor might be for the installation of specialist ties or provision of a security alarm system.

The people section of both SCC formats lists the classes of people who will be working on the site either full time, or only part time in order to complete a compensation event. The list may include scaffolders, of different grades, labourers, drivers, supervisors, designers etc. The contract sets out the cost elements which may be included in the cost for each class of people. Essentially the cost includes what are usually referred to as the prime costs, that is all those elements of cost directly related to the cost of employing a person. Clients often require a basic hourly rate and premium time rates to be included in the SCC for each class of people. Members are required to quote a percentage addition to be added to the prime cost of labour to give the 'people cost' per hour. The percentage addition includes for overhead and profit. Overheads include management costs.

The cost of 'equipment' (scaffolding kit) is based on a published schedule of rates, such as those published by the RICS or the ICE. Members are required to quote a percentage on / off the published schedule. The percentage quoted should include overhead and profit. Rates for equipment not included in the published schedule can be listed separately in the Subcontract Data section.

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'Plant and materials' are paid at cost without addition.



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#### Section 5 - Subcontract Data

The NEC3 requires specific information to be included in the subcontract and provides for the inclusion of alternative statements according to the main and secondary options chosen.

Data is provided as two separate parts of the subcontract. Part One is provided by the main contractor in his tender documentation and includes the identity of the Employer; his senior managerial personnel; site details; and key dates; the place where weather details are to be recorded; risk items; additional compensation events and information relevant to the Main Option chosen.

Members are required to provide further information with their tender, which will form Part Two of the data in the agreed subcontract. This will include details of the Schedule of Cost Components; subcontract programme; insurances and bonds. This is also an alternative place to the Activity Schedule for members to provide details of how erect and dismantle activities will be charged and how extra hire will be calculated.

The data and information provided by the main contractor and the member at tender stage may change as a result of negotiations prior to the agreement of the subcontract. It is the agreed Subcontract data that is included in the Subcontract.

## Time and programme

The period of time in which the Subcontract Works are to be completed is not stated. Instead, the 'starting date' and the 'completion date' are given in the Subcontract Data. The 'starting date' is the date on which the Subcontract commences to enable design work to be progressed and the 'completion date' is the date by which the Subcontract Works are agreed to be completed, including the removal of all equipment. The 'starting date' is not necessarily the date on which work is commenced on site. There is facility in the Subcontract Data for 'access dates' to be given which are the dates that specific activities/phases of work are to commence on site.

The 'starting date' not the 'access date' influences interim payment dates.

The Contract Data also provides, if necessary, for the inclusion of 'Key Dates'. These are dates by which certain events have to take place. For example, the construction of a gantry may need to be completed to enable accommodation units to be delivered on a specific date.

Members are required to submit a programme for approval by the Main Contractor. The Main Contractor may require the programme to be submitted with the tender or alternatively by a date stated in the Subcontract Data. The information to be included on the programme is set out in the contract and must accommodate all the information provided by the Main Contractor in the Contract Data. Members will be required to update the accepted programme at intervals specified in the Contract Data. The obligation on members to update the programme presents significant problems because the need to update will usually be brought about by other users of the scaffold and information as to changes will not be readily available to members.

The programme is an essential document used for monitoring progress and assessing time effects of compensation events. Failure to submit a first programme will result in the valuation of the Subcontract Work being reduced by 25% until submitted.

## **Subcontract Works Information**

This is one of the most important parts of the subcontract and care should be taken to ensure its accuracy and coverage. It is the changes to this information that will generate compensation events. The information is primarily provided by the main contractor but members will be required to provide some of the information with their tenders to be incorporated in the subcontract.

The information to be provided by the main contractor includes a general description of the work; provision of general arrangement drawings; ground investigation details; restrictions on access and sequencing of the subcontract works; requirements for delivery and storage of equipment; specific health and safety matters; design criteria; performance criteria for individual scaffolds; completion dates; testing etc.

When submitting tenders members will be required to provide specific information, for example programmes and design criteria. They should also require additional information to be included in the Works Information, for example distances between storage areas and work faces; detailed specifications of hand rails included; decking details (lapped boards and fillets etc); notice requirement times and any other matters affecting price and performance. This is also an alternative / additional opportunity to spell out methods of valuation.

## **Compensation Events**

Compensation events are what many in the construction industry currently refer to as claims, but under the NEC3 compensation events include variations. Compensation Events are events which, if they occur and do not arise from the fault of members, entitle members to be compensated for any effect the event has on the Prices, Completion Date or Key Dates.

Compensation events are primarily listed in Core Clause 60.1, with further events listed in the Options and the Contract Data.

There are 19 compensation events listed under Clause 60.1. They include many of the same events found in other forms of contract giving rise to additional cost such as changes to Subcontract Works Information (variations); delay and associated cost due to inability to proceed with the works; disruption caused by others; delays caused by weather. Also included are events not expressly found in other forms of contract. For example, failure of the Main Contractor to reply to members communications which he is required to do under the Subcontract.

Additional events relevant to one of the Main or Secondary Options are listed under the relevant Option. For example errors in Bills of Quantities are an event included in Option B and changes in the law, affecting price, are included under Option X2.

When compensation events arise, particularly those originating from an instruction of the Main Contractor, there is a duty on the Main Contractor to inform members that the event is a compensation event. At the same time of notifying the compensation event the Main Contractor may ask for a quotation as to the cost and time effects of the event. Members may still be obliged to carry out the instruction.



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If the Main Contractor fails to notify a member of a compensation event which he should have notified, or an event arises from a failure of the Main Contractor for e.g. causing disruption to the Subcontract Works, the member notifies the Main Contactor of the event. Except in circumstances where the Main Contractor should have notified the member of a compensation event the member must notify the Main Contractor within seven weeks of becoming aware of the event. Failure to do so will deny members of any changes to Prices or dates for completion. In other words members will not be compensated. Having notified the Main Contractor of a perceived compensation event the Main Contractor is obliged to respond to the member within a set period of time. Failure to do so, following notification by the member, will result in the event being determined a compensation event.

The Main Contractor may also ask the member to submit a quotation, or alternative quotations, for proposed instructions. Quotations must deal with changes in prices and changes in time. If the compensation event will have an effect on time the member is required to include a revised programme with his quotation. A strict timetable has to be complied with for both the submission of the quotation and receipt of the Main Contractor's response. Default on the part of the Main Contractor in complying with the timetable can result in the quotation being accepted.

The valuation of compensation events is based on the prices included in the Schedule of Cost Components, or Shorter Schedule of Cost Components. If quotations are requested members are required to estimate the costs based on the SCC but if work has been completed actual costs can be used. Members will have to ensure they have good administrative systems for recording time on site. There is no facility within the NEC3 for including a Schedule of Rates as one might do under DOM/I or DOM/2. However it is possible to include such a schedule but it will require amendments to the wording of the subcontract by an experienced person.

## Risk Register and Early Warning Notice

The Risk Register is a new addition to the contract management procedures of NEC3 and allows both main contractor and subcontractor to include in the register specific risks, which require close attention and treatment. The provision of scaffolding is full of inherent risks and therefore only particular risks, which could seriously affect cost and time are included in the register forming part of the Subcontract Data section of the subcontract.

Inclusion of a particular risk in the register does not necessarily mean that the risk of cost and time rests with the main contractor. That will depend on the Main Option selected. If options A or B are selected the risks will lie with members. If options C and D are selected (Target Cost) the risk will initially lie with the Main Contractor / Employer but part of the cost could be borne by members, subject to the risk / reward scheme.

The Main Contractor may assume a specific risk included in the subcontract data for which he will specifically accept cost and time responsibility. An example of a specific risk that may be identified to be at the risk of the Main Contractor, even if option A or B is used, is the risks associated with the tying of scaffolds to existing buildings where the ability of the building fabric to withstand the pull out loads cannot be determined.

The subcontract allows for the inclusion of additional risk items into the Risk Register as they are identified and for the removal of items from the register as they are dealt with. Further items are added through the Early Warning System, which requires both Main Contractor and Subcontractor to issue early warning notices as the risks are identified. Failure to give an early warning could have an affect on the level of compensation or extension of time granted.

## **Payment**

Payment mechanisms and the amount to be paid, both interim and final, are set out in the Core Clauses, the appropriate Main Option and the Secondary Options. Payments are based on Prices, Price for Work Done to Date (PWDD) and Defined Cost, the definition of each item and its use in calculating payments being set out in the subcontract.

Given that most scaffolding subcontracts will incorporate an Activity Schedule (Main Options A and C) the Prices will be those for each of the individual scaffolds or parts of scaffold, as would normally be included with a DOM/I or DOM/2 subcontract.

PWDD is the amount of work done for interim payment purposes. Under option A the amount will be the sum of the items on the Activity Schedule completed up to the assessment date. If the Activity Schedule price of a scaffold includes for the entire erect, hire and dismantle values payment will not be made until the scaffold is dismantled and cleared from site. Unlike DOM/I and DOM/2 subcontracts where the amount of interim payments is based on the amount of work done, even if the item is work in progress. Under NEC3 subcontracts it will therefore be necessary for Activity Schedules to be broken down in more detail than is normally required. Not only could it be necessary for individual scaffolds to be broken down into erect, hire and dismantle prices but it may also be necessary to break them down further into individual lifts in order to ensure that adequate interim payments are made. Ideally the items on the Activity Schedule will be the same as those on the programme.

The Core clauses relating to payment require the main contractor to certify and make payment within a prescribed time scale. The additional requirements of the Housing Grants Act, requiring payment and withholding notices to be issued to a more rigorous time scale, are brought into play through the inclusion of one of the secondary options.

## Conclusion

This is not a subcontract that can be put in a drawer. It is an instruction manual for managing a project and relies on knowledge, skill and expertise to operate it. The mechanisms have to be understood and complied with. Administration and management time for staff will be significantly increased but there are also significant benefits to be had. Failure to comply with the various procedures could have costly results.

Members intending to subcontract under this form should, as a minimum, obtain and read the form and its associated guidance notes. Members should preferably seek expert tuition and guidance from professionals with knowledge of scaffolding, as like other standard forms, it is not specifically written for temporary works subcontractors.

