NEC3 Engineering and Construction Contract: Management of the Programme

by **Dan Quinn***

Understanding and utilising the programme effectively to drive successful outcomes is a key element to any construction contract, and one which frequently can be mismanaged. The *New Engineering Contract 3rd Edition (NEC3®) Engineering and Construction Contract (ECC)* has a particular approach to dealing with time and the programme, which is often overlooked during the contract by client and contractor alike – at their peril.

Coming from a quantity surveying background, I fully understand and appreciate that having a regularly accepted programme is fundamental to the success of the contract. The ECC works in a logical way, starting with Clause 30 which looks at Starting, Completion and Key Dates and progresses to Clause 36 which deals with Acceleration. Within the ECC, Core Clause 3 breaks down programme requirements into seven main clauses (Clauses 30 to 36) and they are considered more fully below.

Programme requirements – Clauses 31/32

The requirements of the NEC3 are different from other forms of contract. Whilst contracts like the JCT suite retrospectively look to analyse delay and entitlement, and tend to compare current programmes to an original baseline programme (which often bears no resemblance as to how the works have and are being carried out), the ECC takes a different approach, utilising the programme as a living, breathing part of the project.

Within the ECC, Clause 31.2 clearly illustrates a list of requirements that are compulsory to each programme submitted for acceptance. Clause 31.2 states that the items shown on the programme include: Starting Date/ Completion Date/Key Dates and Planned Completion, amongst many others. These are also essentials which form part of the Clause 32 update.

Clause 32 differs from Clause 31, due to it relating to the revised programme. Clause 32.1 and 32.2 detail what the contractor is to show on each revised programme and when the contractor is to submit a revised programme. A requirement of Clause 32 is to update the programme with progress to date, at intervals as stipulated in Contract Data Part 1 and forecast future planned works. The programme is updated as per the 'day to date', which is the cut-off point which defines actual progress and planned works.

Types of float

Another key area where NEC3 takes a different approach to other contracts, is seen in how the contract deals with 'float'.

There is a specific requirement to show 'float' under the contract (Clause 31.2), and I have found that understanding which party involved in the contract is entitled to use 'float' in the event of a change (CE) can be a hot discussion topic.

The three types of float which are shown on each programme are defined as:

General/Free Float

- Float prior to completion.
- This is available to either party when assessing the revised programme, the effects of delay, compensation events and changes in logic.
- This float is available on a 'who gets there first basis'.
- Hence the project manager or the contractor can use this if required.

Time Risk Allowance (TRA)

- Clause 31.2 requires that provisions of TRA must be shown on each programme.
- The aim of TRA is to show that risk has been applied to each operation/ activity on the programme.
- TRA is owned by the contractor – this is to cover his perceived risks.
- In theory TRA therefore provides 'comfort' to the employer that activities and, in particular, the critical path can be achieved.
- A typical example could be:
  - 100m of pipe to be laid @ 10.5m per gang/per day.
  - This would take 9.5 days.
  - The contractor would then allow for 'say' 12 days within his programme.
  - This illustrates to the employer that the contractor has proportioned risk to the operation.

Terminal Float

- Terminal Float is the difference between planned completion and the completion date.
- Terminal Float is also owned by the contractor.
- The employer cannot use Terminal Float and the contractor is entitled to maintain Terminal Float following delay to planned completion through change, which means it should be preserved in the event of any extension being granted to the completion date.

Tendering/Estimating

From a commercial perspective, it can be good practice to include Terminal Float on a programme for change purposes and to reduce the risk of delay damages being applied. This is because it gives the contractor the opportunity to maintain his float. Authorised changes to planned completion will then push back the completion date to allow for the Terminal Float allowance, as the contractor is entitled to maintain his Terminal Float.

Programme acceptance

Under Clause 31.3 there are four bullet points, which are the only reasons defined for which the project manager cannot accept a programme. One in particular is that the programme does not represent the contractor's plans realistically. Therefore, despite being commercially advantageous to include these contractor-owned float allowances where feasible/appropriate, it should be remembered that the programme must be realistic and, as such, float allocation must also be realistic to each activity.

A good tip is to ensure that within Contract Data Part 2, a tender programme is referenced, thereby ensuring that time risk allowances are accepted prior to commencement. As per Clause 31.1, if a programme is not identified in the Contract Data, the contractor is to submit a first programme for acceptance. If one is referenced within the Contract Data, this can automatically become the accepted Clause 31 programme. I would always recommend that this is done, as it negates the risk of one quarter of the Price for Work Done to Date being retained under Clause 50.3 until such programme has been accepted by the project manager. This is very important as it can affect the contractor's cash flow and again, from a QS background, cash is 'king' and 25% is likely to represent a significant portion of the sums due.

Early Warnings (EWs) – Clause 16

Early warnings, by their nature, are future events which are not certain to happen.

Whilst the third bullet point of Clause 32.1 states that the contractor is to show on each revised programme how they plan to deal with '…any delays', which could be assumed to be an early warning, from personal experience I would recommend that EWs are not shown on each programme. This is due to the fact the programme could end up being full of 'what if' scenarios. This (potentially) would make the programme extensively long and may include irrelevant information. I would suggest only EWs that have a likelihood of circa 90% of occurring, and are therefore almost certain to happen, are to be put on the programme. I would recommend any other EWs that have a likelihood of eventuating of less than 90% are not shown on the programme.

Compensation Events (CE) – Clause 6

Another requirement of Clause 32.1 is that the effects of 'implemented' CEs are shown on each revision of the programme. Clause 62.2 states:

'Quotations for compensation events comprise proposed changes to the Prices and any delay to the Completion Date and Key Dates assessed by the Contractor. The Contractor submits details of his assessment with each quotation. If the programme for remaining work is altered by the compensation event, the Contractor includes the alteration to the Accepted Programme in his quotation.'

A common misconception I have personally experienced in the past is that, often, people think that a CE requires a revised Clause 32 programme to be submitted with a CE quotation. This is not the case. Clause 62.2 clearly states that the contractor is to include alterations to the Accepted Programme only. This could be a snapshot of the change which has occurred due to the CE.

It is important to recognise the difference between Clause 3 and Clause 6 in that Clause 3 requires the delivery of the project, whereas Clause 6 requires a much smaller programme, which could essentially be a snapshot of the impacted programme demonstrating the change..

When a CE effect is incorporated into the Accepted Programme it is frequently, although not immediately, apparent how the CE has caused changes within the programme. It is common practice to have a sub-programme showing the CE activities and their interface with the Accepted Programme activities and to also provide an explanatory narrative with any CE submissions.

I would suggest that all activities associated with the employer or others are shown on the programme from the outset. These should be clear milestones within the programme, so, should a delay occur and the employer not comply with one of the three CEs listed below (all admissible under the contract as providing a trigger for additional time and cost), the demonstration of additional defined costs and time is much easier to demonstrate:

- 60.1(2) – The employer does not allow access to and use of a part of the site by the later of its access date and the date shown on the Accepted Programme.
- 60.1(3) – The employer does not provide something which he is obliged to provide by the date for providing it shown on the Accepted Programme.
- 60.1(5) – The employer or others:
  - do not work within the times shown on the Accepted Programme,
  - do not work within the conditions stated in the Works Information, or
  - carry out work on the site that is not stated in the Works Information.

If any of the above are not shown on the programme, the contractor would find it very difficult to show that the delay occurred and the contractor would have potentially lost out on three areas of change from the outset. It is also recommended to ensure any additional relevant Z clauses which have been inserted within the contract, that are requirements of the employer, are clearly shown as milestones on the programme.

Acceleration – Clause 36

Under Clause 36.1 of the ECC the project manager cannot simply instruct acceleration and enforce the contractor to bring back his planned completion date.

Pursuant to Clause 36.1, the project manager can only instruct the contractor to provide quotations for acceleration to achieve completion before the completion date. The contractor has a contractual duty to mitigate any delay, but has no obligation to accelerate. Clause 36.1 states:

'The Project Manager may instruct the Contractor to submit quotations for an accel-eration to achieve Completion before the Completion Date. The Project Manager states changes to the Key Dates to be included in the quotation. A quotation for an accel-eration comprises proposed changes to the Prices and a revised programme showing the earlier Completion Date and the changed Key Dates. The Contractor submits details of his assessment with each quotation.'

Should the contractor not wish to accelerate, or feel that it is not possible to achieve earlier completion, he can notify this to the project manager. Again, from a commercial perspective, it would be recommended to ensure that pre-contract additional Z clauses or amendments to the original clause have not been added/amended to the contract to allow such instructions.

In accordance with Clause 61.1 the project manager can instruct a change to the Works Information and instruct a quote for this change, which is a CE. However, in respect of acceleration (Cl.36.1), the project manager can only instruct the contractor to submit a quotation for an acceleration to achieve completion before the completion date. This does not mean that the project manager can instruct the contractor to implement acceleration measures; so, in this regard, this is different from a CE.

New Engineering Contract 4th Edition (NEC4)

Whilst this article focuses on the current NEC 3rd Edition, it has recently been announced that NEC4 will soon be released.

One amendment in particular, which has been cited as a change within the new version, looks at the programme element of the contract, whereby there has previously been no consequence in respect of a failure to respond by the project manager where the contractor has submitted his programme for acceptance. It is suggested that the new version will enable deemed acceptance of the programme, due to no response from the project manager within a prescribed time frame. Although the specifics of the 4th Edition are not yet known at the time of writing this article, no doubt a notification to remind the project manager that he has failed to respond will be due in a similar manner to the deemed acceptance provisions relating to CE submissions.

Summary

To conclude, the programme is a key element and fundamental to the ECC. Getting an accepted Clause 31 programme along with subsequent Clause 32 programmes regularly updated and accepted is vital to both the employer and the contractor, and a fundamental principle to the effective operation of the ECC in practice.

Again, as previously stated, and coming from a quantity surveying perspective, the programme is an essential tool in accurately assessing change events, both from a time and cost perspective, and any failure to consider the two in parallel risks CEs being undervalued at the time of quotation. It also helps to look at how the project has changed from tender stage and aids with demonstrating additional defined costs, as well as effectively capturing project changes for consideration on future projects of a similar nature when determining time risk allowances.

I have deliberately not gone into detail regarding concurrent delay as this could be an article in itself. However, I am aware, coming from a commercial background, that concurrency can be mitigated to a certain extent (unless true concurrency does occur) by having a regularly accepted programme that can help evaluate what has occurred first.

Another tip which I would recommend would be to add a column within the programme which clearly illustrates Time Risk Allowance (TRA). From a commercial viewpoint this makes it easy to pick up the programme and see that TRA has been allowed for and, as previously stated, gives the project manager or contractor comfort that the other party has made this allowance.

As well as this, I would recommend adding other columns onto the programme to show resources, i.e., people and equipment, by reference to the appropriate RAMS (Risk Assessments and Method Statements), as this could also help to back up quantum and resource in terms of defined costs. These could even be 'hidden' within the programme and used as a back-up provision, which can help demonstrate rigour when quantifying change events and calculation of additional defined costs.

To come to an overall conclusion, my final piece of advice would be to fully utilise the contract, adhere to the contractual requirements (including programme), and use it to its full capacity. I have often seen contractors and subcontractors 'afraid' or reluctant to submit early warnings or compensation event notifications, as they feel the other party will see this as them being 'contractual'. This is not the case. The employer has selected the contract for a reason and it should be fully utilised from day one, with the supply chain educated throughout.

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