# Gibson Consulting Newsletter

No.19 : Spring 2015

Sorry for the delay in issuing our Spring Newsletter; this was due initially in resolving some minor issues in my second book, which has now been published and is available at all good booksellers (and possibly a few bad ones!). A copy of the Publisher, Wiley-Blackwell's flyer is attached to this Newsletter.
The 'second delay', was a build-up of 'work assignments', but with 'some midnight oil', this 'delay' was mitigated.

In this, our Spring 2015 newsletter, we feature an article 'Planning Tips, Programme Submittal and Acceptance''. The article applies to Contractors/Subcontractors and Contract Administrators/Architects.

Our second article is titled, 'Acceleration and Mitigation', and is essentially an extract from my second book, "A Practical Guide to Disruption and Productivity Loss on Construction and Engineering Projects".

A further article on this subject will be included in our next Newsletter.

If you wish to discuss any of the matters or points we raise in these articles, please do not hesitate to make contact.

## Planning Tips, Programme Submittal and Acceptance

There is a clear need for a 'baseline' programme to be developed after the award of contract, reflecting the intentions of the contractor.

Contract administrators need front-line skills to review a contractor's baseline programme. Accordingly, contract administrators increasingly have to decide if, and to what extent, they are going to trust, approve or accept a contractor's programme submissions. In today's planning software paradise, CA's should be able to detect common techniques or mistakes when reviewing programmes that attempt to or increase the likelihood of extension of time awards. These techniques mean that a programme will not function as a proper predictive tool for measuring progress or quantifying the impact of delays and changes.

The JCT 2005 Contract has a very basic requirement for submittal of the contractor's programme, as described in clause 2.9 of Section 2. Essentially, the only requirement being a 'master programme for the execution of the Works'. Unlike the NEC3 Contract, there are no requirements on the content of the programme and supporting information.

The NEC3 contract recognizes that the programme is an important tool for use by both the contractor and project manager. The programme is valuable not only as a scheduling tool but also as a project management and change control tool.

NEC3 has distinctive features on the content of the contractor's programme. Indeed, the programme is the contractor's programme and he owns the terminal float. The programme is not only used to portray how the contractor intends to carry out the works, but can also be used for forensic analysis to determine the effect of compensation events for both time and money.

One of the key features of the programme under NEC3 is that upon its acceptance the contractor's programme becomes the 'Accepted Programme'. Any subsequent programmes submitted by the contractor and accepted by the project manager in turn become the 'Accepted Programme', superseding the previous programme.

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## Planning Tips, Programme Submittal and Acceptance(Cont'd)

What the Contract Administrator / Project Manager should look for in a programme review

When the programme is submitted, the CA should ask the following questions,

i) Does it comply with contractual obligations, milestones, or restraints on working hours or methods?

ii) Is the entire scope of the work represented?

iii) Are any activity durations questionably too long, or too short for the scope of work they represent?

iv) Are there any obvious errors in the programme related to the sequence or timing of the works?

v) Are there any onerous requirements of the employer's professional team, e.g. early completion programmes, unrealistic time allowances for approvals or supply of information, which are employer's risks?

A very dangerous misunderstanding exists with a CPM programme submittal; many contract administrator's and other professionals are still of the mistaken opinion that a CPM submittal exists of several pages of activity listings and/or a barchart plot or two. A CPM submission for review should consist of a full copy of the computer files necessary to recreate the programme; everything else is just frills.

A CPM submission, both for the baseline for review and subsequent updates, should consist of three discrete items, which are,
i) The activity details, including description, original and remaining durations, and percent complete. In conjunction with this, you should see for each activity other computed information such as early and late start and finish times, and total float.
ii) The logical relationships that connect the various activities together to form a network which makes the CPM work. Full details of any lags and leads, i.e. imposed time durations between activities, is a must in the submittal.
iii) Lastly and certainly not least is 'constraints'. The true logic of a network can be overridden by the programme containing various time constraints on an activity(s).

These will artificially reduce total float and could create an invisible delay, or even have the activity just expand to take all available time. This will never show up on a barchart plot and is only found in a 'constraint' listing and/or a copy of the computer files.

Having been satisfied that the information in the contractor's submittal is sufficient for a proper review, here are five basic checks or tests that should be carried out using the computer files provided by the contractor,

Test 1: Does the 'longest path' filter identify a reasonable critical path for the project?
Make sure the longest path is reasonable, and then check the reasonableness of near critical paths.

Test 2: Are there any open-ended activities in the programme?

In general, there should be only two open-ended activities in the entire network. One beginning activity with no predecessors and one completion activity with no successors. Every other activity should be logically tied into the network. Furthermore, every activity should have its finish constrained with at least one FS (finish to start) or FF (finish to finish) successor relationship to another activity. Likewise every activity should have at least one SS (start to start) or FS (finish to start) predecessor relationship to another activity.

## Planning Tips, Programme Submittal and Acceptance(Cont'd)

Test 3: Do any of the activities have too much float?

Activities with too much float may indicate missing logic links, or logic links that have been overridden in a subsequent progress update. Identify any such activities.

Test 4: Are there any unnecessarily long gaps in workflow when grouping activities by work area and sorting by early start dates?

In most cases once work begins in a particular area or phase of the project then the programme should allow work to continue uninterrupted in that area or phase. Long calendar gaps in a work area or phase may indicate less than ideal workflow and suggests an adjustment of preferential logic links to create a better plan.

Test 5: Are there activities with unnecessary contractor assigned constraints?

As constraints override the network logic in calculating activity start / finish dates and total float they should be used sparingly, if at all. A better approach is to use activity durations and network logic to model the project, and thereby eliminate constraints.

Acceptance of the programme the programme

If the contract administrator fails to comment it may be implied as acceptance that the contractor's programme is contract compliant / satisfactory. When 'accepting' a programme the contract administrator could be merely acknowledging receipt of contractor's intentions. In 'approving' the programme, the contract administrator is more often seen to have performed some level of due diligence on the programme, such as asking the questions above, and is therefore acknowledging that the submission complies with the terms of the contract. However, it is important that a realistic baseline is established for the management of the works and the assessment of potential and actual effects of changes, unforeseen events or other circumstances that could delay the works.

Programmes are key documents in extension of time and delay claims disputes; therefore their significance in potential dispute resolution forums cannot be under-estimated. At the same time, the perspective must be maintained that the programme is a management tool to assist in managing the work. A balance should be struck between keeping the contractor on an accurate progress path and the emphasis on the programme as a claims document. If approval is granted, this should not in any way relieve the contractor from complying with the contract, or in any way increase the employer's liability.

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# Acceleration and Mitigation

"Acceleration" tends to be bandied about as if it was a term of art with a precise meaning, but this is not the case.

The Society of Construction Law's Delay & Disruption Protocol defines 'acceleration' in Core Statement 20 of the Protocol, as,
"*Where the contract provides for acceleration, payment for the acceleration should be based on the terms of the contract. Where the contract does not provide for acceleration but the Contractor and the Employer agree that accelerative measures should be undertaken, the basis of payment should be agreed before the acceleration is commenced. It is not recommended that a claim for so-called constructive acceleration be made. Instead, prior to any acceleration measures, steps should be taken by either party to have the dispute or difference about entitlement to EOT resolved in accordance with the dispute resolution procedures applicable to the contract (see Guidance Section 1.18).* "

***What Is Acceleration?***
On a construction or engineering project, acceleration is the carrying out of work more quickly than previously planned. It usually occurs in one of two forms; firstly it occurs when a contractor, or subcontractor, is required to carry out increased, additional or delayed work within the same time period without the benefit of being given an extension of time.

Acceleration is closely related to disruption. It is only in recent years that standard forms of contract have made allowance for the employer to issue instructions to accelerate the works.

*The reasons for acceleration usually fall into one of the following categories:*

1) *By agreement or instruction.* By agreement between the parties or, if the contract so provides, on the instruction of the architect.
2) *Unilateral acceleration.* Unilaterally on the initiative of the contractor, often categorised as 'mitigation' by the contractor or as 'using best endeavours' by the employer.
3) *Constructive acceleration.* Constructive acceleration is where the contractor argues that he has no real alternative in the circumstances.

Acceleration occurs when a contractor is required to perform its work in less time than originally planned. The party liable for the cost of acceleration is the party responsible for the underlying delay and/or the party deciding to accelerate.

For example; the contractor is required to install 5,000 m of pipework in 30 days. If the employer later requires the contractor to 5,000 m of pipework in 20 days, or install 7,000 m of pipework in 30 days, then the contractor was 'accelerated'. This is an example of 'instructed acceleration'.

*'Constructive acceleration'*, occurs when a contractor encounters an excusable delay during the carrying out of the contract work, such as design changes, late information or employer-caused delays. Under the contract, the contractor is entitled to an extension of time. If the contractor is not granted a time extension then he is constructively accelerated in its obligation to meet the contract completion date.

## Acceleration Under the Contract

*JCT Standard Building Contract 2005*

No mention is made of 'acceleration in the main body of the contract, except at clause 1.1, where the term 'Acceleration Quotation', is defined as meaning,

*" .... a quotation by the Contractor for an acceleration in the carrying out of the Works or a Section made under paragraph 2 of Schedule 2."*

The primary purpose of Schedule 2 is to set out the procedure for 'Variation Quotations'. The architect, or contract administrator, may instruct the contractor to provide variation quotations by virtue of clause 5.3.1 of the main terms of the contract.

## Acceleration and Mitigation (Cont'd)

*"If the Employer wishes to investigate the possibility of achieving practical completion before the Completion Date ... the Architect/Contract Administrator shall invite proposals from the Contractor in that regard."*

The 'Acceleration Quotation' must identify the amount of time that can be saved and the amount of the adjustment to the 'Contract Sum' that the contractor would require. The quotation must include direct costs, consequential loss and expense and an allowance for the cost of preparing the quotation

*NEC3 Form of Contract*

Acceleration is referred to at 'Core Clause' 36 of the June 2005 edition of the NEC3 standard form of contract.

Under clause 36.1 the project manager may instruct the contractor to submit an acceleration quotation. As with the JCT form, the stated aim of acceleration is to achieve completion before 'the Completion Date'. The 'Completion Date' may be the original date stated in the 'Contract Data' (the final section of the NEC form) or a later revised date arising out of an extension of time award.

Unlike the JCT acceleration clause it is not for the contractor to state what acceleration it can achieve; under clause 36.1 of the NEC it is the project manager who informs the contractor of the revised date, or dates, that it is required to achieve.

Following receipt of an instruction the contractor must provide a quotation and a revised programme showing how it can achieve the early completion date(s). The contractor may decline to quote but, if it does, it must state why (clause 36.2). Presumably the usual reason for declining to quote will be that the contractor considers the revised dates are not achievable.

*ICE Conditions Contract, 7th Edition*

Acceleration is referred to at clause 47(3) of the ICE Conditions Contract, 7th edition. Clause 47(3) provides that the employer may request the contractor to complete the works earlier than 'the time or extended time for completion prescribed by Clauses 43 and 44 as appropriate'. Clause 43 refers to the completion date in the Appendix to the Form of Tender (which is a standard document provided at the back of the contract); clause 44 refers to extensions of time.

If the employer requests the contractor to complete early and the contractor agrees, then 'any special terms and conditions of payment shall be agreed ... before any such action is taken'.

**Acceleration; By Agreement or Instruction**

There should be no difficulty in obtaining payment where the contract administrator, in exercise of his powers under a contract, orders acceleration of the work or the employer and the contractor agree acceleration and a claim under the direct loss and expense clause is unnecessary.

Once the contract administrator instructs acceleration, it is clear that the contractor must be paid for it by the employer. It follows that where directed acceleration has been instructed, the contractor is entitled to be paid:

1. The agreed rate for acceleration, if any rate has been agreed; or
2. In the absence of an agreed rate, a reasonable rate for the acceleration measures, ie, the contractors actual costs plus a reasonable level of profit and overheads.

## Acceleration and Mitigation (Cont'd)

**Unilateral Acceleration**

This is the situation where a contractor accelerates without any agreement with the employer or instruction from the architect. No pressure has been placed on him by the refusal of an extension of time; indeed in this situation it may be that the contractor is reasonably confident of getting an extension of time. The reason for doing so may be order to find work for operatives from another site which is drawing to a close. The result may be that some time is recovered and an extension of time is not required.

In most such cases, the contractor will find it difficult to contend that he was going other than 'using his best endeavours' to reduce delay. It is by no means clear, however, under what contract provision the contractor could be paid even if the architect.

**Constructive Acceleration**

This is an argument advanced by a contractor and is based on the architect's failure to give an extension of time to which the contractor believes he is entitled. A contractor will put more resources into a project than originally envisaged and then attempt to recover the value on the basis that he was obliged to do so in order to complete on time, because the architect failed to make an extension of time of the contract period. The problem faced by the contractor is that in the absence of an extension of time he may be faced with liquidated damages being levied against him. He has a stark choice; he can continue to work as planned and efficiently in the hope that he can later successfully demonstrate that he is entitled to an extension of time and that this will be granted. Alternatively, he can accept, temporarily at least, that he is in default and take steps to mitigate the consequences of this temporary default by putting more resources on the project,

and / or reorganising the works, so as to finish by the date for completion.

An important question to be asked before this kind of argument can be entertained is the extent to which pressure is put on the contractor; the contractor's problem is one of causation. Where the architect fails to make an extension of time, either at all or of sufficient length, the contractor's route under the contract is adjudication or arbitration. If, as a matter of fact and law, the contractor is entitled to an extension of time, it may be said that he can confidently continue the work, without increasing resources, secure in the knowledge that he will be able to recover his prolongation loss and/or expense and any liquidated damages wrongfully deducted, at adjudication or arbitration. If he increases his resources, that is not a direct result of the architect's breach, but of the contractor's decision.

In practice, it must be acknowledged that a contractor in this position may not be entirely confident; the facts may be complex and the liquidated damages high. Faith in the wisdom of an adjudicator or arbitrator may not be total. It may be cheaper, even without recovering acceleration costs, for the contractor to accelerate rather than face liquidated damages with no guarantee that an extension of time will ultimately be made. As a matter of plain commercial realism, the contractor may have no other sensible choice than to accelerate and take a chance as to recovery. Unless the contractor can show that the architect has given him no real expectation that the contract period will ever be extended and in those circumstances the amount of liquidated damages would effectively bring about insolvency, this kind of claim has little chance of success.

However, under the Housing Grants, Construction and Regeneration Act, a contractor now has the option to address the uncertainty at an early stage and not wait until after completion of the project. He can refer the architect's / contract administrator's refusal of his extension of time claim to an adjudicator during the course of the contract, rather than to arbitration or litigation after completion of the project.

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## Acceleration and Mitigation (Cont'd)

In the United States, a 'constructive acceleration' doctrine has been established to permit a contractor to claim his acceleration costs. The U.S. doctrine, modified for the British construction scene, comprises a six-stage test of the following questions,

1. Is there a delay, resulting from a relevant event, that would entitle the contractor to an extension of time?
2. Has the architect / contract administrator been given notice of the delay in accordance with the contract?
3. Has the architect / contract administrator refused or failed to grant an extension of time?
4. Has the architect / contract administrator, or employer, acted in some manner that can be construed as an instruction to complete by the original or revised date for completion?
5. Has the contractor accelerated its performance?
6. Has the contractor incurred additional costs as a result?

Hudson's Building and Engineering Contracts refers to the concept of 'Constructive Acceleration' as follows, "In the United States, a highly ingenious type of contractor's claim, based on a 'constructive acceleration order' theory, has been accepted in the Court of Claims for government contracts in the not uncommon situation where an [architect/engineer], in a bona fide belief that the contractor is not entitled to an extension of time and is in default, presses a contractor to complete by the original completion date, and it is subsequently held that the contractor had been entitled to an extension of time. This is, however, a development of what, in any event, is a largely jurisdictional and fictitious doctrine of 'constructive change orders' (CCOs) developed by the Boards of Contract Appeals, and is not founded on any consensual or quasi-contractual basis which would be acceptable in English or Commonwealth Courts, it is submitted."

Typically, when a delay occurs in a project, the contractor often expedites progress through 'activity crashing' with respect to available float and time-cost relationships. In effect, prescribing overtime work and/or injecting additional resources, in order to shorten (crash) the duration of certain activities. While injecting additional resources can significantly increase project costs, prolonged overtime working may cause declines in productivity and performance , which may also generate rework.

*The second part of this Article will be in our next Newsletter.*

**Contact Us**

Details of our services can be found on our website, ***http://www.gibsonconsulting.co.uk/***, but if you would like to discuss how we can help you, Please don't hesitate to contact Roger Gibson on 024 7624 3607 or 07970 119 465, or send an email to ***roger.gibson@gibsonconsulting.co.uk***