

A STUDY OF THE MANAGEMENT OF TIME BY COMPARING AND EVALUATING THE PROVISIONS FOR THE MANAGEMENT OF TIME IN THE JCT STANDARD BUILDING CONTRACT (JCT SBC), THE NEW ENGINEERING AND CONSTRUCTION CONTRACT (NEC3) AND THE NEW COMPLEX PROJECTS CONTRACT 2013 (CPC2013)

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The aims of this study are to compare the management of time provisions of CPC2013 with those of two analogous construction contracts and to theoretically evaluate and comment on the different contributions made by three construction contracts to the management of time of a construction project. This study used a desk-based approach to analyse the respective provisions of the three contracts to be compared and evaluated. In so doing, the study took account of decided case law that impacts on the legal matters associated with the management of time on construction projects. The findings offer a framework that may be used for the theoretical evaluation and comparison of the provisions for the management of time amongst construction contracts and which may be used for practical evaluation and comparison of the same.

Keywords: construction contract, evaluation, time provision.

INTRODUCTION

The second annual NBS National Construction Contracts and Law Survey (RIBA Enterprises, 2013) asked the question (P17): ‘[D]uring the construction phase of the project, which of the following matters did you find to be the most difficult or recurrent in 2012’. ‘Assessment of delay and extensions of time’ was the top response from Contractors and Clients and the second top response from Consultants.

This study was inspired by the recent publicity surrounding the publication of the new Complex Projects Contract 2013 (CPC2013) published by the Chartered Institute of Building (CIOB). This new contract is marketed as the “*World’s first Time Management Contract for Complex Projects*” (CIOB, 2013). This article states that CPC2013:

focuses on managing time to ensure projects are delivered to specification on budget and without delays. Unlike existing contracts, which target failure through only

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through (sic) persuasion and financial compensation for failure, CPC2013 provides the procedures to enable parties to manage time (and cost) risk events in a modern and proactive fashion.

The article argues that “[C]urrent standard forms of contract do not encourage, and in some cases actually inhibit, the competent management of time making them unsuitable for controlling the risk of time and cost escalation on complex projects”. As a rationale for the contract, it goes on to stipulate that “[A]ccording to CIOB research, less than 20% of complex building projects were completed on time, 60% were completed more than 4 months late, and 55% more than 6 months late” and to quote from Keith Pickavance, a Past President of the CIOB and lead author of CPC2013 who said: “[T]he causes and consequences of delay are the single most common reason for uncontrolled loss and cost escalation in complex building and engineering projects, where the design is produced by the employer or contractor.” Carnell (2005, P1) applies the adage ‘time is money’ with the explanation that ‘[N]o two construction projects are alike; ... The cost of a project will be determined by an equation which balances time, materials and labour against the conditions under which the works are to be executed and the requirements of the person for whom the works are being carried out’. Balancing this equation with time as a prime factor is the function of project management.

THE AIMS OF THE STUDY

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METHODOLOGY

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THE JCT STANDARD BUILDING CONTRACT (SBC 2011)

This title actually refers to three different contracts that can be used as the contractual arrangement between an Employer (client) and a Contractor, each designed for a different procurement route and contract strategy including pricing. The three contracts are:

1. The JCT Standard Building Contract With Quantities which may be used for complex construction projects that follow the traditional or conventional procurement path, which are lump sum contracts with the price determined in advance and based on drawings and a bill of quantities;
2. The JCT Standard Building Contract Without Quantities which may also be used for complex construction projects that follow the traditional or conventional procurement path, which are lump sum contracts with the price determined in advance but based on drawings and a specification;
3. The JCT Standard Building Contract With Approximate Quantities which may be used for complex construction projects that follow the traditional or conventional procurement path, but which are measurement contracts with the

price determined after completion on a pre-agreed basis using drawings and bills of approximate quantities.

This study will use the JCT Standard Building Contract With Quantities (SBC/Q 2011) for the comparison and evaluation.

The parties involved

The key parties involved in the management of time under the provisions of SBC/Q 2011 are:

1. The Employer and the Contractor who are the parties to the contract;
2. The Architect/Contract Administrator (A/CA), whose function is to administer the provisions of the contract;
3. The Employer's representative who may be appointed to exercise all the functions ascribed to the Employer in the conditions of contract.

Terms and provisions for the management of time

Schedule 8 of SBC/Q 2011 provides optionally that: '[T]he Parties shall work with each other and with other project team members in a co-operative and collaborative manner, in good faith and in a spirit of trust and respect. To that end, each shall support collaborative behaviour and address behaviour which is not collaborative'.

Clause 2.9.2 obliges the Contractor to provide the A/CA with his master programme for the execution of the Works with an optional provision to identify the critical path and/or providing such other details as are specified in the Contract Documents.

Under clause 2.1 of SBC/Q 2011, the Contractor is required to 'carry out and complete the Works in a proper and workmanlike manner and in compliance with the Contract Documents...'. Under clause 2.4, the start date of the Works is the 'Date of Possession' and '[O]n the Date of Possession possession of the site ... shall be given to the Contractor who shall thereupon begin the construction of the Works ... and regularly and diligently proceed with and complete the same on or before the ... Completion Date'. This clause 2.4 places a contractual obligation, a condition, on the Employer to give possession of the site to the Contractor on the Date of Possession. In turn, a contractual obligation, a condition, is placed upon the Contractor both to progress the works by way of proceeding 'regularly and diligently', a phrase whose interpretation gave rise to a dispute in *West Faulkner Associates v London Borough of Newham* (1994) 71 BLR 1, and to complete the Works on or before the Completion Date. There is an optional provision that allows the Employer to defer giving possession of the site for a period not exceeding six weeks calculated from the Date of Possession. This provision may be critical in avoiding repudiation of the contract at the outset by the Contractor in circumstances where the Employer is hindered in handing over possession of the site. Completion is signified by the issue of the Practical Completion Certificate which is issued '[W]hen in the Architect/Contract Administrator's opinion practical completion of the Works is achieved...'. There is no contractual definition of Practical Completion but the Courts have considered the matter over the years in several cases. For example: In *J. Jarvis and Sons -v- Westminster Corporation* (1978) 7 BLR 64 HL, Lord Justice Salmon defined practical completion as completion for the purpose of allowing the employers to take possession of the works and use them as intended. In *H.W. Neville (Sunblest) Ltd -v- William Press and Son Ltd* (1981) 20 BLR 78, it was held that practical completion meant that if there were any patent defects the Architect should not give a certificate

of practical completion but did not mean that very minor de minimus work had to be carried out. In *Mariner International Hotels Ltd v Atlas Ltd (2007) HKCFCA*, it was considered that practical completion is a state of affairs in which the works have been completed free from patent defects, other than ones which can be ignored as trifling.

The Rectification Period, the default period for which is six months, follows the issue of the Practical Completion Certificate. Under clause 2.38: '[I]f any defects, shrinkages or other faults in the Works ... appear within the ... Rectification Period due to materials, goods or workmanship not in accordance with the contract ... such defects, shrinkages and other faults shall be specified by the Architect/Contract Administrator in a schedule of defects which he shall deliver to the Contractor as an instruction not later than 14 days after the expiry of (the) Rectification Period. Within a reasonable time after receipt of such schedule or instructions, the defects, shrinkages and other faults shall ... be made good by the Contractor'. Clause 2.39 then states: '[W]hen in the Architect/Contract Administrator's opinion the defects, shrinkages and other faults in the Works ... have been made good, he shall issue a certificate to that effect (a Certificate of Making Good) ...'. The issue of the Certificate of Making Good signifies the end of the construction phase of the contract.

The Completion Date may be adjusted to accommodate delays caused by events that are outside the control of the Contractor. SBC/Q 2011 terms such events as Relevant Events of which there are fourteen specified in clause 2.29. Clause 2.26 provides for a 'Pre-agreed Adjustment' which means the fixing of a revised Completion Date for the Works by the Confirmed Acceptance of a Variation Quotation or an Acceleration Quotation. Clauses 2.27 and 2.28 deal with the 'normal' circumstances. Clause 2.27 places strict obligations on the Contractor to give timely notice of the material circumstances, including the cause or causes of the delay to the A/CA and to identify in the notice any event which in his opinion is a Relevant Event. The Contractor shall, if practicable in such notice or otherwise in writing as soon as possible thereafter, give particulars of its expected effects, including an estimate of any expected delay in the completion of the Works beyond the Completion Date. The Contractor has to keep the A/CA informed of any material change in the estimated delay and supply any further information as the A/CA may require. It is contended that the following of these administrative procedures is condition precedent to having the extension of time granted. Clause 2.28 places a similar strict obligation on the A/CA to make a timely decision and to inform the Contractor within 12 weeks of receipt from the Contractor of the required particulars. If the Contractor fails to complete the Works by the Completion Date, the A/CA shall issue a Non-Completion Certificate. The Employer may then give notice to the Contractor that he requires the Contractor to pay liquidated damages at the rate stated in the Contract Particulars.

Key terms associated with the management of time under SBC/Q 2011, for comparison with the other contracts are: Contract Particulars, Contract Documents, the Works, master programme, Date of Possession; Deferment; Date for Completion / Completion Date; Practical Completion, Rectification Period, defects, shrinkages or other faults in the Works, schedule of defects, Certificate of Making Good, delay, extension of time, Relevant Events, Non-Completion Certificate, liquidated damages.

THE NEW ENGINEERING AND CONSTRUCTION CONTRACT (NEC3)

This title is somewhat misleading as it is no longer 'new': there have been three editions: the first, NEC, in 1993, the second, NEC2, in 1995 and the most recent,

NEC3, in 2005. In addition, NEC3 is not a contract but rather is a ‘family’ of different standard form contracts. Pinsent Masons (2011) have described NEC3 as a:

“stimulus to good management: overall, NEC3 focuses on 'real time' management of the project rather than looking back on what the parties should have done. However it is very heavy on administration, and requires good understanding of its procedures and sufficient resources from both the employer and the contractor to make it a success”.

The standard form construction contract for the contractual arrangement between a Client and a Contractor in the NEC3 family is the NEC3 Engineering and Construction Contract (ECC). Like the JCT Standard Building Contract, the ECC has options, each also designed for a different procurement route and contract strategy including pricing. The six options are:

- A: Priced Contract with Activity Schedule;
- B: Priced Contract with Bill of Quantities;
- C: Target Contract with Activity Schedule;
- D: Target Contract with Bill of Quantities;
- E: Cost Reimbursable Contract;
- F: Management Contract

One option, from A to F, must be selected.

This study will use the NEC3 Engineering and Construction Contract (ECC) with Option B, Priced Contract with Bill of Quantities, using the abbreviation ECCB for the comparison and evaluation.

The parties involved

The key parties involved in the management of time under the provisions of ECCB are:

1. The Employer and the Contractor who are the parties to the contract;
2. The Project Manager who represents the Employer’s interests and whose role is to manage the contract for the Employer.
3. The Supervisor who is responsible for ensuring that the Contractor satisfies the quality standards stated in the Works Information.

Terms and provisions for the management of time

Clause 10.1, the first term of the contract, states that the Employer, the Contractor, the Project Manager and the Supervisor shall act as stated in this contract and in a spirit of mutual trust and co-operation. There has been debate in the construction law literature as to what is meant by this term and whether such a contractual provision could be enforced. ECCB places significant emphasis on the programme. The programme is a key management tool. If the Contractor fails to provide a programme at the start of the project, 25% of the sums due under the contract can be withheld until a programme is submitted. The Contract Data has provision for a programme to be identified either in the Contract Data part two, i.e. that provided by tenderers as part of their offer, at the Contract Date or to be submitted by the Contractor within a period stated in the Contract Data part one, i.e. that provided by the Employer. Section 3 of the Contract Data part 1 provides that the Contractor submits revised programmes at intervals no

longer than a number of specified weeks. The Project Manager, as well as the Contractor, use the programme to monitor progress and to assess the time effects of compensation events. Clause 11 defines terms. Clause 11.2(1) refers to the Accepted Programme and defines it as the programme identified in the Contract Data or the latest programme accepted by the Project Manager. The Contract Date is defined in clause 11.2(4) as the date when the contract came into existence. The Starting Date is when the contract comes alive; the Contractor may begin off-site work associated with the project. The Access Date is when the Contractor can have access to the site. The Completion Date is the date by which the Contractor has to achieve Completion. Completion is defined in Clause 11.2(2) as occurring when the Contractor has done all the work which the Works Information states he is to do by the Completion Date and has corrected notified Defects which would have prevented the Employer from using the works. Clause 30.1 provides that the Contractor does not start work on the Site until the first access date and does the work so that Completion is on or before the Completion Date. There is no provision for progress. Clause 30.2 provides that the Project Manager decides the date of Completion and certifies Completion within one week of Completion. The Completion Date may be extended under Clause 6 of the Core Clauses owing to the occurrence of one or more 'compensation events' of which there are 19 listed in clause 60.1 Compensation events are events for which the risk in terms of both time and money is transferred from the Contractor to the Employer. Clause 62.2 provides for the Contractor to submit quotations for any delay to the Completion Date due to the occurrence of a compensation event. Completion marks the start of the defects correction period. A Defect is defined in 11.2(5) as a part of the works which is not in accordance with the Works Information. The defects date is specified in the contract data as a number of weeks after completion. The 'defects date' and the defect correction period' may be confusing terms. The 'defects date' defines how long the Contractor will be liable to rectify defects in the works. Typically, a 'defects date' might be 52 weeks after Completion. The 'defect correction period' is the period in which the Contractor must rectify a defect which has been notified to him. Different 'defect correction periods' may be specified for different types of defects, depending on the kind of defect and the urgency of the Employer's need for correction. At the defects date or at the end of the last defect correction period, the Supervisor issues the Defects Certificate, one of the most important certificates required by ECCB, which brings most of the Contractor's obligations to an end and signifies the end of the construction phase of the contract. ECCB has an option, X7, for delay damages. These are liquidated damages to be paid by the Contractor to the Employer if he fails to complete the works by the Completion Date for reasons that are the Contractor's own fault.

Key terms associated with the management of time under ECCB, for comparison with the other contracts are: Contract Data, Works Information, the Site, the works, Accepted Programme, Contract Date, Starting Date, Access Date, Completion, Completion Date, compensation event, defects date, defect correction period, Defects Certificate, delay damages.

THE CIOB CONTRACT FOR USE WITH COMPLEX PROJECTS CPC2013

This contract is described as being suitable for:

- Works of high value or complexity
- Major Real estate projects

•Engineering/Infrastructure Projects

The Contract consists of the: Contract Agreement, Conditions of Contract, Appendices to the Conditions of Contract. It may be used where the procurement method is: build only of a design prepared under the direction of the Employer; build only of a design prepared under the direction of the Employer, but with the Contractor's design of parts, and, design and build or turnkey projects in which the Contractor is responsible for both the design and construction of the Works. There are 7 Appendices to the Contract:

Appendix A – Definitions

Appendix B – Contract Data

Appendix C – Building Information Modelling

Appendix D – Working Schedule and Planning Method Statement

Appendix E – Progress Records

Appendix F – Events

Appendix G – Issue Resolution

Keith Pickavance, co-author of CPC2013, writing for NBS, stated:

'Underpinning CPC2013's more practical and effective approach to time management is the requirement of a dynamic, critical path network time model (or 'Working Schedule', as it is called). This is published together with a Planning Method Statement which sets out the rationale underpinning the Working Schedule, the assumptions on which it is based and the calculations used in its preparation.' (Pickavance, P. 2014)

The parties involved

1. The Employer and the Contractor who are the parties to the contract;
2. The Contractor's Authorised Representative, who, under clause 14.1 'shall be empowered to act with the Contractor's full authority in all matters relating to the contract'.
3. The Employer's Authorised Representative, who, under clause 14.2 'shall be empowered to act with the Employer's full authority in all matters relating to the contract'.
4. Contract Administrator who administers the provisions of the contract on behalf of the Employer
5. Project Time Manager – the Contract Administrator's advisor on project time-related matters.
6. The Time Management Expert (Auditor) whose role includes the examination of the Contractor's Planning Method Statement, Working Schedule and Progress records before work commences and at regular intervals during the progress of the Works.

Terms and provisions for the management of time

Clause 5.1 states that the parties shall work together in the manner set out in the contract and shall co-operate in a spirit of mutual trust and fairness.

CPC2013 places great emphasis on a dynamic time model. Appendix D provides for the Working Schedule and Planning Method Statement. D3 states that the Working Schedule shall conform to the Planning Method Statement and shall describe the durations and sequence of all Activities planned to be carried out in the future, and those completed in whole or in part, and is to comprise, inter alia, all Activities necessary for the effective completion of the Works. The Working Schedule is the name given to the Contractor's critical path network and, together with the Planning Method Statement, function as the Contractor's time model for the Works. On submission, it needs to be checked for compliance by the Project Time Manager and also independently audited from time to time. The Auditor is person named in Appendix B as the time management expert. The role is to examine before work commences and at specified intervals, the state of the Contractor's Planning Method Statement, Working Schedule and Progress Records. The Working Schedule is required to be updated regularly with actual progress from the Progress Records and will be used for the calculation of any extension of time and any time related compensation. The Working Schedule must conform to the standards in the CIOB's Guide to Good Practice in the Management of Time in Complex Projects.

The start of the construction phase of the contract is signified in clause 5.4 which provides that on the Access Date, the Employer shall afford access to and grant possession of the Site to the Contractor. Clause 5.5 provides that the Contractor shall commence the physical Works on Site on the Access Date, proceed to carry out the Works in a good and workmanlike manner and in accordance with the contract and to complete the Works by the Date for Substantial Completion. Progress is thereby expressly, contractually accommodated. Clause 47.1 provides that as soon as it has formed the opinion that the Works have ... achieved Substantial Completion, the Contract Administrator shall notify the Contractor and Employer of its intention to issue a Certificate of Substantial Completion ... and its opinion as to when Substantial Completion was achieved. If there are no disagreements, Substantial Completion will be deemed to be agreed to have been achieved in accordance with the Contract administrator's opinion. Clause 47.3 provides that the Contract Administrator shall issue the Certificate of Substantial Completion to the Contractor within 5 business days of the notice given under the provisions of clause 47.1. The date of the Substantial Completion Certificate marks the start of the Post-Completion Retention Period, the period of which, in weeks, is specified in the Contract Data, Appendix B. Within 20 Business days of the end of the Post-Completion Retention Period, the Contract Administrator shall issue to the Contractor a list of all the defects, shrinkages and other faults of which the Contract Administrator is then aware (Clause 48.2.1). The Contractor shall then commence and carry out the specified making good of the defects, shrinkages and other faults and notify the Contract Administrator when it is complete (Clause 48.3). Within 5 Business Days, the Contract Administrator shall issue a Certificate of Making Good Defects (Clause 48.6). This certificate specifies the date upon which the Contractor's obligations for making good defects are discharged and effectively signifies the end of the construction phase of the contract.

The Early Warning provisions (Clause 36) and the Risk Management provisions (Clause 37) mitigate the risk of delays.

An 'Event' is defined in Appendix A as 'an occurrence which is ... an Employer's Time Risk Event'. Events are listed in Appendix F. An Employer's Time Risk Event is defined as an occurrence identified as such in Appendix F which is not caused or contributed to by the Contractor or anyone for whom the Contractor is responsible.

CPC2013 accommodates delays caused by Events through Clause 38 which sets down a mechanism for calculating the effect of an Event on Time. Clause 40 then provides a process by which the Project Time Manager considers the information produced from the provisions of Clause 38, and ultimately obliges the Contract Administrator to award an Extension of Time if appropriate. The process purports to obviate a subjective 'fair and reasonable' assessment because the Contractor must demonstrate an entitlement to an extension of time by showing records of performance as evidence and by calculation using the updated working schedule. Under the provisions of 49.1, if the Contractor fails to achieve Substantial Completion by the Completion Date, the Contract Administrator shall issue to the Contractor a Certificate of Failure to Complete. Liquidated Delay Damages for failure to complete will then be applied as compensation to the Employer for the period from the date signified on the Certificate of Failure to Complete and the Substantial Completion Date.

Key terms associated with the management of time under CPC13, for comparison with the other contracts are: Contract Data, Access Date, possession, Site, Works, Date for Substantial Completion, Substantial Completion, Certificate of Substantial Completion, Substantial Completion Date, Certificate of Making Good Defects, Certificate of Failure to Complete, Events, Extension of Time, Liquidated Delay Damages.

COMMENTARY

The nature of this commentary is to pose some questions. The first is to ask whether there is a real difference amongst the three forms. Each form, in essence, provides the same procedures albeit using different terminology and demanding somewhat different administrative methods. A criticism of all of the forms might be that each is overburdened with detail to the extent that there are too many opportunities for minor breaches. Each form imposes micro-management on the parties; the greater number of provisions in each of the contract set out in detail how the parties are to conduct the administrative matters associated with managing the project. Is this helpful or bureaucratically confusing? Can relationships of mutual trust, co-operation, good faith, spirit of trust and such-like be embedded contractually, or do these emanate from good management practices associated with careful and sensible procurement and good contract administration? Perhaps the issue is the nature of a standard form. In order to deal with the management of projects that are continually different, would it not be better to simplify the contract and leave the management expertise to the team who are professionally trained to manage the process. For example, would it not be sufficient for the construction contract and those contracts with all involved in the procurement, design, construction and delivery of the building to be stipulated as being entire contracts with payment conditional upon delivery of the completed building by the defined date. Such a stimulus would focus the minds of the 'team' on the final product and induce collaborative working to minimise disputes and allowing management flexibility led, probably, by the Project Manager. In any case, in terms of managing time, it might promote good project management to have a contract that states simply: *"The contractor and the design team shall work together to produce the building by the designated date and will be paid when the building is produced"*.

REFERENCES

- Carnell, N.J. (2005) *"Causation and Delay in Construction Disputes"*, Blackwell, Oxford.
 CIOB (2013) *"Contract for use with Complex Projects"*, CIOB, London,.

CIOB, (2013) “*World’s first Time Management Contract for Complex Projects*” published by the CIOB, [online] article by the CIOB, 14th June 2013. Available at: <http://www.ciob.org/media-centre/news/world%E2%80%99s-first-time-management-contract-complex-projects-published-ciob> [Accessed 14th October, 2013].

JCT “*Standard Building Contract with Quantities 2011*”, Sweet and Maxwell, London.

NEC3, “*Engineering and Construction Contract*”, NEC, Thomas Telford, London, 2013.

Pickavance, K. (2014) “*The CIOB Complex Projects Contract 2013*”, NBS, RIBA Enterprises, downloaded from: <http://www.thenbs.com/topics/contracts-law/articles/theCIOBComplexProjectsContract2013.asp> Accessed 25th April 2014.

Pinsent Mason (2011) “*Standard Form Contracts: NEC*”, [online]. Available at: <http://www.out-law.com/en/topics/projects--construction/construction-standard-form-contracts/standard-form-contracts-nec/> [Accessed 14th October, 2013].

RIBA Enterprises (2013) “*The second annual NBS National Construction Contracts and Law Survey*”, RIBA Enterprises.

Rowlinson, M. (2011) “*A Practical Guide to the NEC3 Engineering and Construction Contract*”, Wiley, Chichester.

Thomas, D. (2012) *Keating on NEC3*, Sweet and Maxwell, London.

Cases

H.W. Neville (Sunblest) Ltd -v- William Press and Son Ltd (1981) 20 BLR 78 Mariner International Hotels Ltd v Atlas Ltd (2007) HKCFA

J. Jarvis and Sons -v- Westminster Corporation (1978) 7 BLR 64 HL.

West Faulkner Associates v London Borough of Newham (1994) 71 BLR 1.