Rennaisance

Keith Pickavance[1]

Just as the 15th Century movement in the arts was stimulated by the influx of Byzantine scholars who brought the ancient literature of Greece into Italy, so, the rebirth of the construction industry in the early part of the second millennium may well be heralded by the bringing of a new wisdom in the publication, by the pan-industrial Society of Construction Law[2], of its Protocol for the management of delay and disruption.[3]

Earlier drafts of the Protocol[4] have been considered by a number of invited consultees, including the RIBA and oth the in the er major institutions concerned with construction and civil engineering. It has been debated in open workshop, presided over by HHJ Humphrey Lloyd[5]; over 6000 copies of the working drafts have been down-loaded from the internet; and over 400 written responses considered in the formulation of the Protocol. The final edition was released on 16th October in a ceremony chaired by Sir Phillip Otton, the President of the Society of Construction Law.[6]

The drafting committee of eleven, made up of an architect (your author) two quantity surveyors, two construction planners, two engineers and four lawyers have spent the last two years drafting a code of good practice to overcome the sort of problems that by some estimates cost the industry over £8billion per annum in this country alone. If adopted by the industry, it will influence just about every construction contract, contractor, engineer, architect, surveyor, project manager and developer that hitherto has thought that it is the contractor's responsibility to manage change on site, or that the quantification of the effects of change can properly be made intuitively.

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[1] Keith Pickavance is chairman of Pickavance Consulting Limited (London and Hong Kong), he is the author of 'Delay and Disruption in Construction Contracts (LLP 2000) and specialises in the resolution of disputes involving delay in construction and civil engineering contracts.

[2] Since its foundation in 1983, the Society of Construction Law has worked to promote for the public benefit education, study and research in the field of construction law and related subjects (including adr, arbitration and adjudication), both in the UK and overseas.The Society of Construction Law now has over 1100 members from all sectors of the construction industry

[3] The Society of Construction Law "Delay and Disruption Protocol" (October 2002) www.scl.org and www.eotprotocol.com

[4] "Protocol For Determining Extensions Of Time And Compensation For Delay And Disruption" Consultation copy (November 2001) www.scl.org and www.eotprotocol.com

[5] Offices of Baker & McKenzie, London 22 May 2002

[6] Institute of civil engineers, London

Make no mistake, this is not the parochial problem with an unnecessary solution as the RIBA seemed to think in its response to the initial consultative document.[7] Delay, that often results in too many projects finishing late and over budget, often supplemented by enormous claims for compensation or liquidated damages, is a problem of international proportions.

The reason that it is so widespread can be identified in a simple equation implicit in most forms of construction contract and explicit in some.[8] It is this: It is a generally accepted principle of risk management that those who are most able to manage a particular risk should bear that risk.[9] However, in construction and engineering contracts that formula is stood on its head. Once the contractor is appointed and the work commences on site, all the risk of change or interference that is left in the hands of the Employer cannot be managed because all the information needed to manage that risk is left in the hands of the Contractor[10]. Of course, the Contractor is required to use the tools he has to manage the Employer's risk and to 'overcome and avoid unnecessary delay howsoever caused'[11] but, if he fails to do so, he is to be compensated for any loss he suffers and given more time to complete.[12] History has shown the possibility of the Contractor managing the Employer's risks to be a pious hope and it is perhaps not surprising that under the current standard forms of contract there is little impetus for the Contractor to do so.

In the past, in days of less sophisticated technology, perhaps there was not a lot that could be done. Nor perhaps, in a less claims conscious society, much that needed to be done about that unresolved dichotomy. However, much has changed in the last few decades. The current form of JCT98, which is identical in this respect to JCT80, differs little from JCT63 which, in turn was based upon the 1945 RIBA form in its administrative requirements for the management of change,

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[7] "The Contract is written with a clarity that is sufficient for the safe and effective administration of the great majority of building projects. The overwhelming number of buildings built where no dispute arises demonstrates this. Disputes when they do arise generally do so when there is an irreconcilable difference of opinion between the parties over their obligations. Those obligations include, of course, determinations which are the subject matter of this draft Protocol. With good administration by both architect and contractor, disputes over time seldom arise. Differences of opinion only emerge when administration is poor or else a party wilfully seeks to gain advantage without justification. In the case of poor administration where little attention is given to the well-tried procedures of the Contract and poor records are kept, this Protocol will be of little assistance; simply put it is unlikely that a document which is as long as the Contract will recommend itself to such a person. Moreover, disputes are generally spawned by a lack of raw information; no end of methodology can cure that omission. If there are inadequate records, no protocol will fill the gaps. The RIBA therefore holds the view that this Protocol, although undoubtedly well intentioned, will not serve to cure ailments that arise from poor contract administration." SCL draft Protocol for Determining Extensions of Time and Compensation for Delay and Disruption, Response of the Royal Institute of British Architects (31 December, 2001) at paragraphs 4 to 8.

[8] See the ACA contract PPC2000 clause 18.2 for an example of an explicit duty imposed on the contractor to manage the Employer's risk.

[9] "No construction project is free of risk. Risk can be managed, minimised, shared, transferred or accepted. It cannot be ignored" Latham, Sir Michael, *Constructing the Team* (1994, HMSO), Final Report of the Government/Industry Review of Procurement and Contractual Arrangements in the Construction Industry.

[10] ACA contract PPC 2000 does not even require a programme. JCT98 requires a programme but does not require it to be updated save for the change in completion date on the award of an EOT. No standard forms require the contractor to provide contemporaneously records of progress actually achieved.

[11] See for example, JCT98, clause 25.3.4.1 and ACA contract PPC 2000 clause 18.3

[12] See for example ACA contract PPC2000 clause 18.3 and JCT98 clause 25

certificates of extension of time and loss and expense. That administrative structure was put in place before photocopiers had been invented[13] and before critical path networks had been invented[14]. The desk top computer that we now take for granted was not invented until twenty years ago[15] and much that we currently take for granted was not available more than seven years ago.[16] The tools that we now have available are thus very different from those anticipated by JCT98 and its antecedents. And in construction, as projects have become more complex and the specialisation of trade contractors has also increased, the risk of the effects of change on time and cost has multiplied. So much has changed.

The SCL Protocol is published as a best-practice guide for determining extensions of time and compensation for delay and disruption, but it is much more than that. It is in fact a Green Cross Code for managing change on site. Through the implementation of a rigorous approach to the keeping of records[17], updating of calculations[18] and the dissemination of information previously held only by the contractor, if at all, the design team will now be able to assist the Employer to manage his risk. The Employer and his architect, project manager, quantity surveyor and engineers will not only know what the contractor intends to do from time to time but will also know how the Contractor intends to achieve his intent. If he fails to keep pace with his intentions, they will know what the effect of that will be on his future intent, whether that can be modified and, if so, how? and with what effect?

It follows, that if the Employer's team can read, understand and use the information that will then be available, they can also help the Employer to manage the effects of any changes or acts of interference imposed on the Contractor. That management function can then be used productively

[13] The heat sensitive paper copier was developed commercially in the early 1960s by Xerox.

[14] Although not a network programme in the form we now know it, the birth of networks is attributed to The Project Evaluation and Review Technique developed in the U.S. between 1956 and 1958 in relation to the programming of the development of the Polaris missile. In this method of planning, time was estimated on three assumptions: "pessimistic", "optimistic" and "most likely" and then mathematically assessed to determine the probable completion date. Originally, cost data was assumed to be constant and not reviewed although later developments of the method permitted costs to be reviewed on a similar basis.

[15] The Apple 2 personal computer was first made commercially available around 1981.

[16] Until 1995 the fastest commercially available processor ran at 486khz, as a result of the release of increasingly faster Intel Pentium chips we now have operating systems and user software that use 32 and 64 bit technology and run on processors at speeds in excess of 3GHz on a laptop.

[17] The protocol requires records to be produced and handed over to the Employer or his contract administrator, contemporaneously. See Appendix C 'Model Records Clause' devised for adoption by contracts drafters.

[18] The Contract programme is a management tool that is to be produced updated and handed over as electronic data that can be read, edited and used in delay management

so that these difficulties are overcome during the course of the works by re-planning, rather than in adjudication, arbitration or the courts, after it is all over, by compensation.[19]

Of course none of this can be achieved overnight, but it is now 35 years since the green book on architectural management published by the RIBA[20] first heralded the advantages of critical path network analysis[21] in the management of design and construction sequences[22]. Perhaps now, in the light of the publication of the SCL Protocol, it is time for those concerned with the continuing education of architects to revisit this subject[23] and to make sure that architects who practice as contract administrators are given the training they will need for the future.[24]

2064 and Words.

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[19] The proposals contained in the Protocol are consistent with the thrust of The Latham Report: '*Constructing the Team'* (1994, HMSO), Final Report of the Government/Industry Review of Procurement and Contractual Arrangements in the Construction Industry and with the the Egan Report: '*Rethinking Construction* (July 1998) The report of the Construction Task Force to the Deputy Prime Minister, John Prescott, on the scope for improving the quality and efficiency of UK construction, although both devised different solutions to the problem they both identified.

[20] The Handbook of Architectural Practice and management, 1967 issue, Volume 2.

[21] "While most offices are familiar with bar charts, which are relatively simple to produce and use, the decision to use network analysis for programming and progressing involves training staff to use the technique. It requires much clearer and more precise analysis of all the tasks in the design process. The premature use of network analysis by untrained staff usually results in a flow diagram rather network, and while some value as a means of thinking through the project, it is not effective as a programming and progressing technique. Nevertheless given trained staff, network thinking and techniques can be used with benefit over the whole range of work." Ibid. Part 3.311, page 2 at para. 4.

[22] "The purpose of this section is to show the need and the architect's responsibility for programming at all stages of a job, and to set the basic requirements for all programmes" Ibid. Part 3.310 page 1 at para. 1)

[23] The Handbook of Architectural Practice and management, 1967 issue, Volume 2 part 3.311 page 2 at para. 5 says: "large offices can benefit from the formation of a separate work planning section. Such a section would act in an advisory capacity to project architects and also co-operate with the office manager or accountant on common data requirements. It has been found that the size of the work planning section is generally between 1% and 2% of total staff. This means that offices with over 50 staff can begin to think in terms of a full-time specialist, usually associate or senior level (i.e. equivalent of the C or D level of responsibility) who is not necessarily an architect that may be from another discipline.

A work planning section is able to devote time and effort to developing and refining the use of techniques, and can organise the feedback on the essential data from completed project, which is required for efficient future programming. To avoid undue separation, and in order determine better project management through the office, staff can be seconded to the work planning section for periods of six months to a year on a programmed basis. The period in this section will be regarded as an essential part of training for higher posts."

[24] So far as this author is aware, the only training currently available in the use of critical path techniques for the analysis and management of delay in construction and civil engineering contracts is that sponsored by the CIOB in conjunction with Pickavance Consulting Ltd, who hold two-day courses, twice per year for a limited number of participants.