THE PFE CHANGE MANAGEMENT SUPPLEMENTS: ARE THEY WHAT THE INDUSTRY WANTS?

A paper based on a talk given to the Society of Construction Law in London on 8th June 2004

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Introduction

This paper is based a speech given to a meeting of the Society of Construction Law on the 8th June 2004, in opposition to the motion that 'What the industry wants is the PFE Change Management Supplements'. The paper is in consequence somewhat polemic in tone. It focuses on the version of the Pickavance/Fenwick Elliott Change Management Supplement ('the PFE Supplement') designed to modify the JCT98 Private with Quantities standard form so as to become compatible with the SCL Delay and Disruption Protocol of 2002 ('the SCL Protocol'). Other versions of the Change Management Supplement are available for JCT98 With Contractor's Design, the JCT Minor Works form, GC/Works/1 Design and Build, the ICE7 Measurement Version and the Intermediate Form – they are not discussed in the paper, though similar comments could be made on them.

In my speech, I proposed that the motion should be adopted only if:

- The industry wanted to create a new profession of Risk Managers, paid for by Employers;
- The industry wanted its contracts to become even more complex than previously;
- The industry wanted to force contracting parties into an unworkable straightjacket.

I submitted that this was not what the industry wanted; thus, the motion should be rejected. I concluded by outlining a modest proposal for how, with minimum amendments to the JCT forms, the management of time under those contracts could be improved along the lines recommended by the SCL Protocol.

A new profession of risk manager – paid for by employers?

The Practice Note for use with the PFE Supplement ('the PFE Practice Note') creates a role for a Risk Manager (RM), both pre-contract and post-contract.[1] Pre-contract, the RM's role is to advise the employer about features of the project design and procurement methods that are likely to be important in the management of time and to ensure that the Schedules in the PFE Supplement

1 PFE Practice Note at page 7ff.

are properly completed (a matter on which the PFE Practice Note gives no guidance). Post-contract, the role is to evaluate information required of the Contractor under the PFE Supplement and, on the basis of that information, to assess the reasons for delay and assess whether any extensions to the Completion Date are justified. The RM also has a role in the development of acceleration measures. The PFE Practice Note envisages that a new profession may be required to fill these roles:

> 'The role of the [RM] is not one normally played by any member of the design or construct teams under the standard forms of building contract. The management of the construction process so as to deal with the risks of change, consequent disruption and delay to progress and to manage them so as to minimise or avoid entirely their effects on the Completion Date requires the ability to use techniques that may not always be found amongst the consultancies normally employed.'[2]

Contractors will also have to engage members of this new profession, since only such persons will be able to produce information in the form required by the PFE Supplement, in particular Schedule 2, and by the Employer's RM during the course of the Works.

The required programming techniques are described more fully in the PFE Practice Note, under a heading 'Change Management': [*footnotes omitted*]

> 'The Supplement requires the Contractor to prepare a Programme, using the critical path method … on computerised planning software that will react dynamically to change …
>
> … it is not generally acceptable for the network to have total float set to zero, open ends, negative lags or to have mandatory manually applied constraints which will inhibit the network from adequately reflecting the effect of progress (or lack of it) on the Completion Date.
>
> The Programme must be prepared as a critical path network on industry-standard software that is logically stable… Bar charts are no longer an acceptable way of preparing Programmes. Programmes must be prepared as a properly worked out network, preferably resource-loaded and supported by a method statement.'[3]

It is clear from this passage that the intention is not just to foster good practice in the management of time: if this was the case, the need for programmes to be resourced and accompanied by method statements would be regarded as essential, not just preferable, the use of particular software desirable, not mandatory. Rather, the plan is to foist particular programming methodology, with its attendant jargon and acolytes, on the industry, being regarded as essential. Is this not a case of the tail wagging the dog?

2 PFE Practice Note at page 7.
3 PFE Practice Note at pages 9-10.

The PFE Practice Note suggests a limited role for the RM:

> 'The role of the [RM] is that of advisor. The [RM] has no power to commit either the Employer or the Contractor, or any of the Employer's advisers to any course of action.'

This is belied by the terms of the PFE Supplement itself: in numerous instances it gives the RM power to bind others. Thus, under clause 5A.2.1, it is the RM who accepts the Contractor's Master Programme, 'which acceptance shall be conclusive evidence of the Contractor's intentions as to programming for the future conduct of the Works'. Leaving aside the oddity of the acceptance, rather than the programme, being conclusive evidence of the Contractor's intentions, surely the consequence of the RM's action is to commit the Contractor?

Two other examples – there are more – illustrate this point. Under clause 25.3.1, it is the RM who assesses the Contractor's time claims and advises the Architect of the likely effect of an Employer's Time Risk Event ('ETRE') on the Date for Completion. The Architect must then fix a new Completion Date commensurate with that advice. Again, it is the RM who commits the Architect (and, in effect, the Employer) to a course of action. Under clause 25B.2, the Architect can only instruct acceleration where the RM has delivered proposals for acceleration to the Architect and the RM is reasonably of the opinion that it is *practicable* for the Contractor to comply with the acceleration proposals. The Architect has a separate, and somewhat confusing, discretion, in that he must be of the opinion that it is *reasonable* for the Contractor to comply with the RM's acceleration proposals, but it is clear that it is the RM who calls the shots.

Finally, who pays for this new breed of consultants? It is the Employer. He pays not just for his own RM, whom he engages alongside the consultant team; but also for the Contractor's RM and for the preparation by the latter of the Contractor's initial programme and subsequent updates of that programme. Not only that, but the Employer pays for the Contractor to provide the progress records required of it under Schedule 4 of the PFE Supplement. The Employer does so because all these functions are defined by clause 5A.1.1 as provisional sum work.[4]

This may well be what Contractors want – but does the industry as a whole want Employers to pay Contractors for the preparation and maintenance of contract programmes and, in effect, for all the costs associated with the development of the new profession of RM fostered by the PFE Supplement?

4 See also PFE Practice Note at pages 16-17. Although the PFE Practice Note says this is not the case, it is arguable that, under clause 5A.1.1, read with clause 5A.4, the Employer is also liable, through expenditure of a provisional sum, for the Contractor's costs of replanning in order to manage delays to progress or the predicted effects thereof, since such work appears to be encompassed by clause 5A.4.2!

Complexity and uncertainty in meaning

Taken together, the PFE Practice Note and Supplement comprise about 25 pages of contract terms modifying JCT98 and 23 pages of guidance which, in turn, have to be read with the 90-page SCL Protocol. This is an extraordinary amount of text to deal with one issue in a standard form contract, this version of JCT98 itself running to some 90 pages. Given this volume of text, it is, perhaps, not surprising that the provisions of the PFE Supplement are, in many cases, complex and unclear. A few examples will demonstrate this.

Clause 1.3 of the PFE Supplement defines an ETRE as 'an event listed at clause 25.4 [formerly the list of 'Relevant Events'] as being one for which, if it likely to cause delay to the Date for Completion after the Completion Date, the Employer is obliged to grant the Contractor relief from liability for liquidated damages by extending the Completion Date'. This suggests that an ETRE is, unlike a Relevant Event, not just an occurrence, such as the issue of a variation, but an occurrence which is likely to cause delay to the date for completion after the Completion Date. On the other hand, clauses 25.2.1 and 25.3.1 both appear to view the occurrence of an ETRE as a separate issue from its effect on progress. For example, in the case of a variation, when under clause 25.2.1 does the 21-day notification period run? From the date of that variation, or from the date on which it became apparent that the variation is likely to delay the date for completion, which may be some time later? Such uncertainties could have readily been avoided by ending the definition of an ETRE after the words '… clause 25.4'.

The RM's acceptance of the Contractor's Programme (the definition of which includes its method statement) is clearly of some importance. Why then, does the PFE Supplement fail to deal consistently with what is necessary to secure acceptance? For example, under clause 5A.2.1 acceptance depends on the Contractor's Programme 'complying with the Contract'; under clause 5A.2.3, that this Programme 'reasonably fulfils the Contractor's obligations under the Contract'; and under clause 5A.2.2 that, in the case of revisions, these 'conform to the [RM's] reasonable requirements'. In paragraph 2 of both Schedules 2 and 3, the test is whether the Programme is 'compliant with the Contract requirements'. It is unlikely that each different turn of phrase was intended to convey a different meaning, but uncertainty over such an important matter is undesirable. More importantly, this uncertainty may be symptomatic of a more fundamental difficulty: the failure to properly identify those provisions of the contract with which the Contractor's Programme should comply. This is likely to be a fertile area of dispute.

Paragraph 5 of Schedule 3 (Method Statement) provides a further example. This reads:

> 'From the date of publication of the Master Programme and any update thereto during the period identified in paragraph 5.i of Schedule 2 the method statement shall include by reference to each Activity ID on the critical path network: [*a list of items follows*]…'

Turning to paragraph 5 of Schedule 2 (Critical Path Network), this reads:

> 'From the date of publication of the critical path network and any update thereto
>
> i For the period ending _____ weeks/months from publication the duration for any activity shall not exceed _____ (days/weeks).'

It is unclear whether paragraph 5 of Schedule 3 is concerned with what must be provided when an update occurs during the period identified in paragraph 5.i of Schedule 2 or whether the period, as in the case of the latter paragraph, runs from publication of the update, whenever that occurs. The situation is not helped by the absence of any information in the PFE Practice Note about how Schedules 2 and 3 should be completed and why the information they require is important.

It may be said with some truth that such points of drafting could readily be corrected and that it is always easier to identify difficulties in another's drafting than to prepare such terms oneself. But the complexities and uncertainties in the wording of this PFE Supplement and the sheer volume of text devoted to the single issue of time illustrate a more fundamental problem. That is, the impracticability of including as terms of a standard form contract detailed and prescriptive management systems linked to particular programming methodology in which those forming the embryo of the new profession of RM – but few others – have implicit faith.

Forcing contracting parties into an unworkable straightjacket

Three examples suffice to illustrate the proposition that the PFE Supplement creates an unworkable straightjacket. First, the procedures it introduces seem designed to create a severe case of information overload. Secondly, the levying of liquidated damages for failure to provide that information is uncertain in operation and penal in effect. Thirdly, the mechanisms for assessing delay sit uneasily between the realm of computer science and reality on site and provide a fertile area for dispute.

Information overload

Subject to the expenditure of the relevant provisional sums (clauses 5A.1, 5A.4), the Contractor must provide draft programmes for acceptance by the RM (a) at the start of the Works; (b) at such intervals as are stated in the Appendix; and (c) upon any material departure from the Master Programme, the Master Programme being the most recently accepted draft programme. A programme, for this purpose, consists of a Schedule 2 Critical Path Network and a Schedule 3 Method Statement.

These two Schedules are extremely prescriptive and require the provision of an enormous amount of information. Thus, under paragraphs 13 and 14 (the previous paragraphs also stipulate information to be provided, but I ignore those) of Schedule 2, it is not sufficient for the Contractor to identify the

labour and plant which it considers necessary to carry out each activity on the programme, it must also identify 'the period during each day and each week of the period planned to be working periods and non-working periods'. Under paragraphs 5 and 6 of Schedule 3, the details of resources include, at any rate for critical path activities, details of manpower, gang sizes, tradesmen, work rates, plant, equipment materials and quantities of work. Any material departure from this information – or, for that matter, from any of the other information provided under Schedules 2 and 3 – will, under clause 5A.4.1, require the Contractor to issue a revised Draft Programme for acceptance, and a new Draft Programme may well introduce a new critical path, which in turn will require the provision of yet more information. So information overload is not just a risk, it is a near certainty.

But this is not all the information that the Contractor must provide. He must also, under clause 5A.5 of the PFE Supplement, provide the RM at stated intervals with daily progress records, in the form required by Schedule 4. Paragraph 5 of this Schedule sets out – under 31 (yes – 31!) sub-paragraphs – what these records must contain. To take but one example, they must include separate resource allocation sheets for each planned and unplanned activity, with, by way of example, 'the name and status of each item of labour allocated to an activity in progress', 'the name of each item of plant allocated to an activity in progress and the hours worked on each item', and 'any materials delivered'.

The cost of preparing all this information, collating it and distributing it to the various persons identified in Schedule is likely to be significant. And who pays? The Employer pays because, under clause 5A.1.1 (as seen above), the preparation and provision of this information is provisional sum work, which must be instructed by the Architect. Oh, and the RM will then have to read and digest it all, and the Employer will pay again!

The liquidated damages provisions

What happens if this 'management information' is not provided by the Contractor? Clause 5B of the PFE Supplement provides that, subject to the RM informing the Architect of the Contractor's failure to provide any required Programme or Progress Records (another case of the RM calling the shots), the Architect may serve written notice of default on the Contractor. If the Contractor does not remedy that default within 7 days, the Employer may levy on the Contractor, or require the Contractor to pay, liquidated damages at the rate specified in the Appendix. The intention is, according to the PFE Practice Note, that the amount of these damages should reflect 'those costs that will be expended in the event of a dispute about a claim for reimbursement of loss and/or expense or for an extension of time which, because of the absence of contemporaneous information, then has to be calculated retrospectively'.[5] Figures of between £200 and £5,000 per week of the construction period are suggested.

5 PFE Practice Note at page 16.

This provision appears to be wholly misconceived. First, it is difficult to see why the Contractor's default should cause any loss of the type suggested to the Employer. If the Contractor fails to keep contemporaneous records, which is not the same thing as failing to provide them to the RM, the cost of any retrospective analysis will fall principally on the Contractor, since it will wish to prove its claim, if advanced. Why should the Employer provide such an analysis? Moreover, since the provision of such records by the Contractor to the RM is, generally, provisional sum work – thus at the Employer's cost – there will be a saving to the Employer if it is not provided, particularly if no claim eventuates.

The provision for liquidated damages is, moreover, penal. A single default, say in providing a revised programme by the end of the period stated in the Appendix, will attract liquidated damages at the weekly rate until that default is remedied. A subsequent default, either in providing a revised Programme at the end of the next period or in some other respect, such as failing to provide Progress Reports at the end of that period, will attract a further entitlement to liquidated damages at the same weekly rate until that subsequent default is rectified. Further defaults will give rise to further entitlements to damages at the same weekly rate. All of these entitlements are cumulative with the damages being levied for earlier defaults and are wholly divorced from any loss the Employer might be suffering.

Assessing delay

Clause 5A.2.1 provides that once a Contractor's Draft Programme is accepted as the Master Programme it becomes conclusive evidence of the Contractor's intention as to programming for the future conduct of the Works. The Master Programme is then, under clauses 5A.3.6 and 5A.3.7, to be used for calculating (the word used in clause 5A.3) the likely effect of delay caused by ETREs on the Completion Date; the method by which this is to be done being set out in clause 25.2.1. This method is, in a nutshell, to input information about actual progress of the Works at the relevant time, and about the activities involved in the ETRE and their logic links (the ETRE sub-network), into the Master Programme and then re-run the computer programme used to generate that Programme, to see whether the Completion Date has been affected as a result of the inputted data.

The value of this computer programming exercise as a method of predicting the actual, as opposed to a theoretical, impact of ETREs on progress is however wholly dependant on the quality of the data, such as logic links and duration of activities, used to generate the Master Programme, in particular whether that data has generated a feasible programme, to say nothing of that used to generate the ETRE sub-network. If the Master Programme is not feasible, then it is useless as a basis for assessing the impact of ETREs on the Completion Date.

It might be said that, given the wording of clause 5A.2.1, this does not matter, since the parties have agreed that the Contractor's entitlement to an extension of time will be whatever period results from the re-calculation, ie will lie within the realm of computer science. But the PFE Supplement shies away

from the consequence of applying the machinery in clauses 5A.3 and 25.2.1 – that delays to progress are simply calculated on the basis of the data used to generate the Master Programme. Rather, in clause 5A.2.4 it recognises site realities by stating that the Master Programme may not be feasible and that the Contractor need not work to it. This undermines the whole notion that extensions of time can simply be calculated. If the Master Programme is not feasible, this may be due to an error in the data used to generate it. Such errors will, in turn, invalidate any calculations of delay based on that Programme.

In short, there is an unresolved tension in the PFE Supplement between computer science and reality on site. If either the Contractor or the RM does not like the answer to the question 'Is an ETRE likely to delay completion?' arrived at by applying computer science, they will no doubt argue that, having regard to site realities, the Master Programme was not feasible and can only be made so by adjusting its logic links, sequences and durations – which, once done, will no doubt produce, from their point of view, a more satisfactory answer to the question asked. It is a commonplace that slight changes in such matters can have a dramatic effect on critical path and thus on the calculated delay effect of impacted events. Indeed, one expert programmer may be able to show by calculation that, because of a certain event, the Works should have been delayed by a larger number of weeks than they were, the only reason this did not occur being the sterling efforts of the Contractor. Another expert then shows, also by calculation, that the Works should, as a result of the event in question, have been completed so many weeks early, it only being because of the Contractor's incompetence that this did not happen.

From the Contractor's perspective, the possibility for advancing such arguments is implicit in its right, under clause 25.2.1.1, to update the Master Programme prior to using it to calculate the impact of the ETRE under consideration; the argument being that progress achieved at the relevant time shows that the programme was not feasible, thus its logic links, sequences and durations must be adjusted. As for the RM, he has, under clause 25.3.1.3, a wide discretion to reject the Contractor's calculations, thus could do so on the basis that the Master Programme was not feasible and the data used to compile it erroneous. In neither case does the previous acceptance of the programme preclude such arguments.

A modest proposal

For the above reasons, I invited the industry to reject the motion that what it wants is the PFE Supplement. No doubt the industry does want improved time management of construction projects, but this can be fostered by more modest and less prescriptive amendments to the JCT form, such as the following:

1. Add a new definition of 'Master Programme', making clear that this Programme, including its periodic updates, must include the resource assumptions on which is based and identify a critical path to completion, with an explanation of how that critical path is arrived at;

2. Amend clause 5.3.1.2 to require the Contractor to provide at 28-day intervals (or such other period as is stated in an appendix entry) an amended Master Programme, updated to reflect actual progress on site at that time and as-planned progress, adjusted as necessary to achieve completion by the most recently set Completion Date or, if the Contractor considers that date to be unachievable, by the earliest later date consistent with the Contractor's obligation, under clause 25.3.4.1, to use its best endeavours to prevent delay; and

3. Amend clause 25.2.2.1 to require that the particulars provided by the Contractor of the expected effect of a likely delaying event are to include a copy of the amended Master Programme current at that time, augmented to explain, by reference to the critical path and actual and anticipated resources, the impact of that event on planned progress and/or competition of the Works.

It may well be that, when complying with amended provisions of this type, Contractors will follow the guidance in the SCL Protocol. If by doing so the management of time becomes more transparent and less contentious, more in the industry will surely do so and the SCL Protocol – or at any rate those parts of it found to be most useful in practice – will become widely accepted. If on the other hand the PFE Change Management Supplement is applied and found, for reasons such as those outlined in this paper, to be costly and unworkable, this will set back the laudable aim of improved time management, to which the SCL Protocol is directed.

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'The object of the Society
is to promote the study and understanding of
construction law amongst all those involved
in the construction industry'

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