"Prolongation Claims in Construction Contracts – Cost of Value?"

by

Mr. John Battersby
Mr. Michael Charlton
Mr. John Molloy

Commentary given by Chris Morgan

Papers from a panel debate given to
The Society of Construction Law Hong Kong
in Hong Kong on 22 September 2004
This commentary is provided on the panel debate and discussion held at the Central Conference Centre, Hong Kong on the evening of Wednesday 22nd September 2004, organised by the Society of Construction Law Hong Kong.

The speakers were three well known quantity surveyors, each with many years experience in Hong Kong. They were, in order of speaking, Mr. Michael Charlton, Mr. John Molloy, and Mr. John Battersby. The event was chaired by Mr. Nicholas Seymour, Chairman of the Society of Construction Law Hong Kong.

This commentary is provided by Chris Morgan, also a quantity surveyor with many years experience in Hong Kong, and current Membership Secretary of the Society of Construction Law Hong Kong. The views expressed herein his and do not necessarily represent the views of the Society of Construction Law Hong Kong. Views provided by him are shown in square brackets [ ] to clearly differentiate these from the remainder of the paper.

Mr. Charlton spoke first. He usefully outlined the background to the traditional approach in building contracts, based on the UK JCT 1963 form of contract, which is the basis for the current Hong Kong HKIS private form of contract. He specifically referred to Clause 11(4)(b), which refers to the pricing of variations where work is not of similar character or executed under similar conditions, Clause 11(6) which allows for payment of “direct loss and / or expense”, and also Clause 24 which also makes provision for recovery of direct loss and / or expense.

He made the point that where delay was caused by variation orders, these variations were almost always priced at BQ rates without any allowance for prolongation costs. He also stated that the reference to “direct loss and / or expense” in Clause 11(6) was thought to include prolongation costs.

Mr. Charlton noted that in building contracts, preliminaries were set out fully in the opening section of the BQ, and that traditionally, prolongation costs had been priced by reference to these preliminaries. This obviously gave the result that the valuation of prolongation costs could be either high or low depending on the pricing of the preliminaries by the Contractor. Mr. Charlton went on to say that some time during the 1980s this traditional basis fell into doubt, and that following various cases, (which are set out in his paper) it started to be accepted that loss and expense should be the actual loss and expense incurred as a consequence of the variation. He stated that this would be claimable as loss and expense under Clause 11(6).

Mr. Charlton comes down in favour of the use of actual cost to price prolongation in building contracts. However, he quotes from the learned QC and author, Duncan Wallace, who he says has pronounced in favour of the use of Clause 11(4)(b) to cover loss and expense, that is to price it into the cost of variation orders.
Whilst this commentator can see the argument for pricing prolongation costs within variation orders, as apparently suggested by Mr. Wallace, this ignores the practical difficulties which will often arise in attempting to do this, and it may be that it is for these practical reasons that the alternative method of pricing under Clause 11(6) is set out in this contract. A contract may well have many hundreds of variations, and many dozens of these could be critical and contributing to the delay. A further large number could be causing concurrent delay. To attempt to individually price prolongation costs properly and for each variation which causes critical delay is, for many contracts, simply not practical. Further, there seems little point or need to have to go through what could well be a horrendous exercise to attempt to do this. Where we have a situation where there is a period of prolongation which has to be priced then it is much more practical to simply price this period without having to allocate costs to individual variations. This is what Clause 11(6) allows us to do.

Mr. Charlton also spelt out the position as he sees it under engineering contracts, and makes the point that as there is only a short preliminaries bill in the BQ, this was not conducive to the use of the prelims bill for pricing prolongation and that it prompted a further move away from the traditional approach and towards an actual cost basis for prolongation costs. [This commentator notes that he has seen a number of engineering claims where the Contractor has still attempted to price prolongation at alleged rates in the contract by breaking down BQ rates or using percentages for overheads which may have been agreed with the Engineer for the pricing of variations.]

Mr. Charlton concluded that he thinks the industry has accepted that the correct means of evaluating prolongation costs is by reference to actual expenditure, but emphasizes that this depends on the precise terms of the particular contract.

Mr. Charlton also commented on the practice of adjusting for the duplication in recovery of additional overheads where such overheads are recovered in both payment for variations and in the pricing of prolongation costs. He sets out his thoughts on pages 5 and 6 of his paper. Mr. Charlton’s views are premised on the basis that the overheads in the BQ rate should not be adjusted where the variation may cause a critical delay when it would not be adjusted if the variation has not caused delay. He states that to deduct this allowance in the BQ rate because the Contractor has incurred a delay would place the Contractor in a worse position than it would have been absent any delay. [This commentator would offer a different interpretation on this matter. It is agreed that the overheads in the BQ rates which are used to price variations are not adjusted. However, it is suggested that in pricing prolongation costs the additional recovery of overheads from the variation causing the critical delay should be taken into account by adjusting the prolongation costs to allow for this recovery, i.e. It is the loss and expense which is adjusted, not the BQ rate. Not to do so would mean that the Contractor would be paid twice for some element of his additional overheads, and it seems difficult to believe that the contract intends this to be the case, or that a judge or arbitrator would come to this conclusion.]

Mr. Charlton also touched on the linkage between extension of time and prolongation costs at page 7 of his paper. He also provides a brief review of other forms of contract in general use outside Hong Kong – JCT80, FIDIC 4th Edition, and the ICE Fifth Edition contracts.
Mr. Charlton makes an interesting point in respect of Clause 63 of the Hong Kong Government’s General Conditions of Contract. This clause allows for payment of “Cost” as a result of “Expenditure” which the Contractor has been or is likely to be involved in. Mr. Charlton makes the point that both “Cost” and “Expenditure” appear to exclude opportunity cost which is the basis of many Contractors claims for head office overheads calculated on a formula basis. [Whilst this commentator has seen claims for head office overheads fail, this is generally due to the lack of the necessary proof of cost with a formula calculation, rather than the argument that GCC Clause 63 does not allow for an opportunity cost type of claim. If Mr. Charlton is correct, Hong Kong practitioners may need to review how they are handling claims for head office costs, and Contractors will need to base their claims on costs of running their head office which they can attribute to the delayed contract, rather than relying on a formula type calculation.]

**Mr. Molloy** considered particularly the situation under the Hong Kong Government General Conditions of Contract. He interestingly set out the historical development of the Government Form of Contract starting from the 1971 form. He noted in particular that the provision in GCC Clause 63 (b) which allows payment of additional costs arising from variations appeared for the first time in the 1985 conditions, whilst the wording of GCC Clause 61, dealing with pricing of variations, continued largely unchanged.

Mr. Molloy set out two options for pricing prolongation costs arising from delay caused by variations. The first is that all prolongation is priced at Cost. The second is that prolongation for late possession, suspension and matters referred to in GCC Clause 63, except variations, should be assessed as Cost, but that prolongation caused by variations should first be assessed using the rates in the BQ and if the Contractor can show that he has incurred more money than is reimbursed by such an assessment, then he would be entitled to top up this assessment to reflect his actual costs. Mr. Molloy clearly sets out on pages 8 and 9 of his paper his “arguments and answers” to these two options. [This commentator agrees with the views put forward by Mr. Molloy at 5.1 of his paper, to which reference may be made.] In summary, this concludes that prolongation should be assessed at Cost in accordance with GCC Clause 63(b).

Mr. Molloy continues at 5.2 of his paper to consider his second option, i.e. that prolongation should be assessed at value for variation orders with a top up under Clause 63 if value is less than Cost. However, Mr. Molloy does not agree with this second school of thought, and his views are clearly set out at 5.2 of his paper. [This commentary does not repeat these arguments which may be readily seen from Mr. Molloy’s paper, and this commentator simply notes that in his view the points put forward by Mr. Molloy appear reasonable and have validity.]

Mr. Molloy briefly touched on the position under the KCRC form of contract, Clause 56.3, which he stated clarifies the position that prolongation caused by variations shall be assessed as Cost.

Mr. Battersby opened by stating that in his view prolongation caused by variations should be valued
under the variation provisions, and not paid at Cost. This is a fundamental difference to the other two speakers.

Both Mr. Battersby and Mr. Charlton touched on the matter of extension of time not giving an automatic right to prolongation costs. Mr. Battersby made the point that the Employer cannot profit from liquidated damages during a period of the Contractor’s culpable delay if the Employer has also prevented completion. He also made the point that the Contractor cannot recover damages in respect of an extension of time if he has caused concurrent delay. However, interestingly, he did not apply this to the valuation of prolongation caused by variations which he believes should be valued and not paid as loss and expense or damages. He deals with this at Section 4 of his paper at which he argues that even in the event of a concurrent delay for which the Contractor is responsible, if the Contractor is delayed during that period by a variation then the Contractor should be paid for that prolongation necessitated by the variation.

Mr. Battersby also puts forward the proposition (at 3.10 of his paper) that if a variation causes standing time, then the Contractor may successfully recover the costs of that standing time as a variation even if it could be shown that the Contractor had no alternative work in any event and would suffer no loss from his idle resources. [Whilst this commentator would accept that in practice it would be usual to pay the Contractor for this standing time, it must be equally arguable that if there is no cost, then there is no addition to be made to the valuation of the variation.]

Mr. Battersby also dealt with the matter of the period to be priced for the delay; should it be the period when the delay actually occurred or the extended period at the end of the Contract? Mr. Battersby went on to explain that it is a question of “Cause and Effect”. There is little doubt that what must be priced is the effect of the delay, and it boils down to a clear and careful analysis of the effects of the delay to ascertain the additional overhead resources which are incurred. [I would clarify one point within paragraph 5.2 of Mr. Battersby’s paper when he says that “it is only if, and when, the project as a whole is extended or prolonged beyond its programmed completion period as a result of the delay to the progress of the structure that the Contractor would be involved in the extra employment of resources over and above that allowed in the Contract Price”. I would qualify this to the extent that certain resources could be extended within the original contract period as a result of variations and those extended resources should, of course, be reimbursed to the Contractor.]

Certain further useful points were made during the Question and Answer session.

The question of the impact on the notice provisions was raised if prolongation caused by variations is priced under the variation provisions. Mr. Molloy deals with this matter at 5.1.4 of his paper, and uses it as a further argument for his view that prolongation costs should be valued at Cost, and not under the variation provisions.

The panel were asked about their experience of this matter in arbitrations. Mr. Charlton stated that he had never seen prolongation caused by variations priced under Clause 61 of the Government Form of
Contract. He did, however, refer to the case of John Doyle v. Laing where the judge apportioned costs between the causes of delay. Mr. Battersby said that in his experience on projects it was quite common to value prolongation caused by variations, and that in arbitration he had seen awards where delay due to variations were valued with a top up under Clause 63 of the Government Conditions. He stated, however, that he had also seen the opposite view. Mr. Molloy stated that in his experience, for civil engineering works, it was normal to assess prolongation at Cost, but that for building works quantity surveyors tended to extend the detailed preliminaries rates provided in the BQ. Mr. Battersby commented that substantiating costs of prolongation can be quite difficult and that Contractors often would not have the necessary or complete records to properly do this. It was much easier to provide a valuation which did not rely on records. [Commentator’s Note: whilst this is often the case, it does not, in my view, provide a justification in itself for valuing delay due to variations at BQ rates.]

Within the audience was Mr. Peter Berry, an ex-Government quantity surveyor who had been involved in the drafting of the 1985 Government General Conditions of Contract (‘GCC’) and who briefly explained the background and the thinking behind the drafting. He subsequently provided this commentator with a note of his views on the background and application of Clauses 61 and 63 of the GCC, and this note headed ‘Clauses 61 and 63 (1985 Edition)’ is attached hereto as received. [Commentator’s Note: Whatever the views or intent of the drafters of a contract it is, of course, the interpretation of the written word which is relevant in deciding the proper application of the contract].

In conclusion, Mr. Charlton and Mr. Molloy were of the view that prolongation costs arising from delay caused by variations should be assessed at Cost, and Mr. Battersby was of the view that a valuation should be carried out under the valuation provisions of the Contract. However, all speakers appeared to accept that it was possible to argue it either way due to the various provisions of most contracts. [The view of this commentator follows the majority decision of the speakers, but I am also aware of arbitrations in Hong Kong where it has been decided that the assessment of prolongation arising from variations should be assessed under the variation provisions. So, as the speakers have said, it can be argued either way!]

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Background
The review was driven by a letter of complaint to the Governor in 1980. The complaint targeted the management of civils contracts. Architectural Office (as it was) largely went their own way.

It was decided to use the review to take the opportunity to simplify contract interpretation and make it more consistent, by drafting of the Building form and the Civil Engineering form to be the same, as far as possible, given that one was to be “lump sum” and the other “remeasurement”.

This was done regardless of the differences in the requirements of the two SMM’s particularly so far as Prelims/Preambles were concerned. This basic split has caused the “value/cost” debate. Despite the intentions of the drafters, it seems that so far as Clauses 61 and 63 are concerned, it has resulted in two different approaches to paying claims for disrupted progress caused by variations (usually referred to as disruption/prolongation claims, even though the words are not used in the Contract).

The sources for the two new versions were to continue to be civil engineering based i.e. the ICE 4th and 5th editions, plus a bit of JCT 80, which made it easier for the civils departments to accept (and they did spend most of the money). The civils influence was never overwhelming, because the engineer technical advisers changed a number of times, whereas the building adviser remained unchanged throughout.

It was decided not to follow in the ICE contracts use of “rates and prices”. The new versions would only refer to “rates”.

As the documents developed, another principle evolved (at least as far as the Building form was concerned). Apart from looking after the interests of the tax payer in the distribution of risk, the Contractor was not to be kept out of pocket for additional expenditure brought by the Employer’s changes of mind. The Contractor could take care of changes to the physical work through the rates in the BQ, but could not allow for the unknown “knock-on” effects on progress and on other work.

Clause 61 included familiar words for pricing the physical work and for the adjustment (up or down) of (other) rates, should the varied work impact on them (the proviso). It did not cover any extra expenditure that could not be measured or adjusted – hence Clause 63(b).

Application
The Building contract makes the SMM Preliminaries a mandatory part of the BQ measurement. Anything missed is likely to bring a claim. The SMM must also be followed when measuring variations. It then follows that the Prelims (in so far as they apply) are to be include in the measure and value of any variation. It is the “rates” in the Prelims that are most often adjusted under the proviso, by making allowances for their set-up/removal etc. costs. For this reason alone, the argument that the sums of
money included in the Preliminaries Bill are not “rates”, but are different, being the (not mentioned) “prices”, and therefore do not apply, is unlikely to succeed. If an instruction doubles any Prelim item, Clause 61 applies. It does not differentiate.

If the completed exercise does not reasonably recompense the Contractor for the unforeseen expenditure attributable to any Employer caused delay or disruption, and the Contractor is unhappy, Clause 63(b) is there to put things right – subject to the rules being followed and the supporting evidence.

If the Contractor has included highly beneficial rates in the Prelims, it is no different than a beneficial rate for concrete. The BQ rates apply. There is no power to “claw back” windfall overheads by adjusting other rates under the proviso unless it is the variation work itself that is directly impacting on the other rates, including those in the Prelims by making that work easier or harder.

The civil engineering contract is different in that the relevant SMM refers to very few Preamble items. Generally, the site and office overheads are required to be included in the rates for the physical work. But it has the same clauses with the same wording as the Building version and therefore the same rules apply. Clause 61 and the rates are paramount. Clause 63(b) only applies when all else fails. There is no power to deduct some arbitrary percentage from the rates just because there appears to be an element of over retrieving of overheads i.e. for disruption (not prolongation). There is no specific evidence of how much and where the Contractor has included the overheads.

**Notice provisions in Clause 64**

Sub-clause (1) only comes into effect following the Engineer/Surveyor’s formal notification of the rate(s), usually after Clause 61(2) has been applied. Just sending the completed Bills of Variations to the Contractor is not good enough to start the time bar running.

Sub-clause (2) does not apply to Clause 63. The “written application” referred to in that Clause is sufficient notice and the Clause includes no time bar. It operates in the same way as e.g. Clauses 48(2) and 54(2). This sub-clause refers to Clauses 13, 22, 28, 30, 33, 34 and 66(1)(b), or anything else the Contractor can dream up.

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Matters To Be Debated

Perhaps a few explanatory comments first of all would be appropriate.

In looking at prolongation costs, we are considering the manner in which the cost of site and head office overheads is claimed as a result of variations or other relevant events which give entitlement to time and money. We are not concerned with claims for disruption where outputs and productivities are affected by the delaying events, although they are in fact aspects of the same thing, delay costs are a form of productivity loss which is treated under a different head from that of disruption because of the manner in which extensions of time are normally dealt with under the contract.

There has been considerable conjecture in recent years as to how this should be calculated, especially, in Hong Kong, although similar issues arise in other places (Australia, Singapore and Malaysia for example).

John Molloy will deal with the evolution of the government forms of contract and how this is subject to differing views, and John Battersby will follow with a talk on the actual method of calculating the prolongation costs.

For my part, I want to track the traditional manner in which these costs have been approached in practice and under the contract, so as to set the scene for what we now find in Hong Kong.

The issue of “Cost” or “Value” essentially relates to whether prolongation costs should be based upon the actual expenditure incurred, money actually paid out by a contractor, or losses in opportunity evaluated by formulae (particularly in regard to head office overheads) or whether they should be based upon rates included in the contract.

The Traditional Approach

The traditional approach which most of us are familiar with in dealing with prolongation cost claims arises from the old JCT based contracts.
JCT 1963 is the form of contract under which the majority of English construction case law has evolved.

Essentially, JCT 63 (the basis for HKIS Private Form) clause 11(4) provides 3 rules for valuation of variations:

1: Similar character and similar conditions – at contract rates (11(4)(a))

2: Where not of similar character or similar conditions the rates shall form the basis (11(4)(b))

3: Failing the above, fair valuation (11(4)(b)).

Clause 11(6) of the JCT63 provides that where, following a written application by the Contractor, the Architect is of the opinion that a variation has involved the Contractor in “direct loss and/or expense,” for which he would not be reimbursed by way of valuation of the variation following the valuation rules, then the Architect shall ascertain the loss and expense and certify payment of the same.

Some 35 years ago, when I entered the QS profession, the approach universally adopted was to value prolongation costs based upon the BQ preliminaries.

Building contracts in those days were universally let based upon BQs and the preliminaries section was worded in what, by modern standards, would be regarded as a fulsome manner, with every possible matter addressed and a full schedule of contract clauses repeated for pricing purposes.

The expectation was that the measured work would be priced to include labour, plant and materials, and there would be an addition for profit and “overheads”, generally of the order of 8% -15%. The overheads essentially meant head office overheads, not site overheads. The priced preliminaries equally made provision in the pricing for profit and head office overheads on the items of site overheads therein.

Site overheads were comprehensively priced in the preliminaries section of the BQ, and it was this which formed the basis for evaluating EOT cost claims.

Additional head office overheads were seldom claimed, although everyone was aware of the Hudson formula. (It will be noted that Hudson calculated his formula based on the overhead level incorporated in the contract, not the level of recover available in the market place at the material time, i.e. it was BQ based).

Any additional work instructed as a variation would be priced at BQ rates or pro rata thereto, sometimes adopting the most elaborate pro rata mechanisms so as to be seen to be adhering to contract rates. It was never considered that this would provide in any sense for delay costs. Those were a separate matter.
Therefore, when Clause 11(6) made reference to “direct loss and/or expense” which would not be reimbursed by payment under Clause 11(4), it was understood to mean any loss and expense which arose as a result of delay would be valued under clause 11(6). Of course it might also have anticipated disruption costs but these were normally dealt with by pro rata calculations where possible.

Additionally of course, Clause 24 made provision for recovery of direct loss and expense in respect of other delaying or disruptive events, which were caused by the employer but did not concern variations.

This debate will concentrate on prolongation costs rather than productivity based losses.

Some time in the 1980s, this traditional BQ preliminaries basis, which seemed to have served well for a long time, fell into doubt and confusion crept in, at least amongst construction professionals if not lawyers.

I believe this was for several reasons.

Firstly, claims became more commonplace and with them, legal input became part of the scene. This caused parties to start looking at claims from a legal standpoint, and the question of what was meant by “direct loss and/or expense” as compared with damages at law was considered.

In the case of FG Minter v Welsh Health Technical Services Organisation (1980) CA 13 BLR v 1, it was held that the term “direct loss and/or expense” under JCT 63 is the same as damages at common law; i.e. that loss and expense which arises naturally in the ordinary course of things (Hadley v Baxendale).

In Robinson v Harman, it was held that it is the intention of damages to place the injured party in the same position (so far as money can do so) as if the contract had been performed (i.e. the breach had not occurred).

Thus, it started to be accepted that loss and expense should be the actual loss or expense incurred as a consequence of the variation (or indeed the delay caused by other relevant events recoverable under Clause 24). Therefore, where additional time related project expenditure results from a delaying variation, this would be claimable as loss and expense under clause 11(6).

However, there was some resistance to this mode of evaluation, given that it permitted the contractor to escape the consequences of his own (usually underpriced) preliminaries. Equally, if preliminaries were overpriced, then of course contractors may prefer to retain them as the basis of evaluation. Parties in any event saw the sense in determining costs based upon the contractor’s pricing of the BQ. This represented what the parties had contemplated under the contract.

Clause 11(6) expressly provides that the Architect form the opinion that a contractor has incurred direct loss and/or expense as a result of a variation which he would not have been reimbursed for under Clause 11(4). This seems to invite the parties to assume that perhaps the contractor might
properly have been reimbursed for loss and expense under (presumably) clause 11(4)(b) (where a fair valuation has been used).

In other words, it sounds like the contractor is in a win win situation. If he has recovered under Clause 11(4) all of his loss and expense then he has no need to have recourse to a claim for loss and expense, if not, then he triggers Clause 11(6) to recover the whole amount or to obtain a top up.

The logic of this is questionable to me, why bother with Clause 11(6) if that is the case, why not simply leave things with a fair valuation under Clause 11(4)(b). Why would there be any problem in fully compensating the contractor under Clause 11(4)(b) in the absence of Clause 11(6)?

In the absence of any provision to pay loss and expense under the contract (as in (say) the SIA form of contract in use in Singapore, or the Blue form used in domestic subcontracting) then of course the architect may be disposed to include the delay costs as part of a fair valuation.

The question then has to be asked however, as to why he would see any necessity to make payment under Clause 11(4)(b) when Clause 11(6) expressly provides for direct loss and expense.

Moreover, when clause 24 is reviewed, the provisions for payment of direct loss and expense due to non variation delaying matters is written in exactly the same terms as Clause 11(6), i.e. “the Architect is of the opinion that the Main Contractor has been involved in direct loss and/or expense for which he would not be reimbursed by a payment made under any other provision in this Contract be reason of the regular progress of the Works or of any part thereof having been materially affected by ...”

The question then is how could direct loss and/or expense be recovered under any other provision? Clearly it could not be recovered under Clause 11. It seems that the phrase “for which he would not be reimbursed by a payment made under any other provision in this Contract ...”, or similarly “for which he would not be reimbursed by payment in respect of a valuation made in accordance with the rules contained in sub-clause ...” is inserted out of an abundance of caution rather than because there was any practical intention that such costs would have been recovered other than as a payment under the specific provisions of Clause 11(6) or Clause 24.

Traditionally the pricing of variations under Clause 11(4) was not used in order to cover direct loss and expense at all, or indeed any aspect of “preliminaries”. Rarely would a contractor refer to preliminaries in any respect in trying to price variations unless a piece of plant or equipment were involved which could be priced by reference to items in the preliminaries. They simply did not play a part in the pricing of variations.

Notwithstanding the traditional approach, no less a person than Duncan Wallace has pronounced in favour of the use of Clause 11(4)(b) to cover loss and expense (i.e. to price it into the cost of VOs)

“The situations at which (Clause 11(6)) is aimed are not easy to visualize. It may be intended to
cover cases where variation orders are given at a late date and cause dislocation, though it seems arguable that a “fair valuation” under rule (b) of sub-clause (4) would apply over much the same ground as this clause, and would necessarily take account of all direct loss or expense to the contractor” (Building and Civil Engineering Standard Forms Duncan Wallace).

**Duplication in Recovery of Loss and Expense**

There is a widespread school of thought that when a contractor is paid for variations under the valuation provisions, he inevitably recovers overheads as part of the rules of valuation. If he is delayed by variations, then he is entitled to be paid for overheads (site or head office) under the provisions of the contract. In this event it is thought that there is a duplication of recovery since he is receiving overhead payments twice, under the valuation provisions for the variations and under the provisions which allow for loss and/or expense or cost.

Frequently consultants or the employer will seek to make adjustment in respect of this perceived duplication, by deleting the overheads from variations.

Firstly it should be noted that if a variation is ordered and that variation does not cause a delay, then under the valuation rules, the contractor will receive payment for the overheads at the proportion allowed in the bill rates, so that if 15% is included in measured work to cover profit and head office overheads, then he will have that payment irrespective of whether he incurred any costs against that allowance.

If that same variation now causes delay, the contractor will be entitled to the actual cost of that delay arising from the variation. Why then is there a duplication in regard to the 15% he has already received in valuing the variation under the valuation rules? In truth he would have received that payment in any event and the fact that he now experiences a delay and recovers the costs of same does not represent a duplication in recovery.

If the measure of compensation for loss and expense or additional expenditure is to be judged on the basis of damages, i.e. to put the contractor in the position he would have been in had the delay not occurred, then he would have received his 15% in the absence of delay. To take if off him because he has incurred a delay, is to place him in a worse position than he would have been in absent any delay, albeit he receives his payment under the delay claim. It is suggested that this school of thought is misplaced.

Certainly it is quite wrong to take out the valuation profit and overheads on all variations irrespective of whether they cause delay or not.
Engineering Contracts and Payment for Prolongation Costs

There are additional reasons at least in Hong Kong for the apparent move away from the use of preliminaries in pricing prolongation costs.

Engineering contracts started to adopt a different approach to BQ presentation from that used in building. In particular, the Department of Transport developed an SMM in the 1960s which particularized BQ preliminaries so that only a minimal number of items were measurable. This approach has been perpetuated by CESMM 3, (the Civil Engineering Method of Measurement).

This meant that the contractor had nowhere to price the normal site overhead items which he normally covered in contract preliminaries, beyond those items presented in the BQ. Accordingly, he priced them (or at least alleged that he had priced them) in part in the measured items.

It therefore became commonplace to assume that when variations were valued, a part of the rates for measured work included for site overheads, as well as head office overheads, plant, labour and materials. In this instance, in the event of delay, it no longer became appropriate to use the BQ as a basis of evaluation, because it did not properly or fully include the time related costs traditionally included in preliminaries. This prompted a further move away from the traditional approach, and towards the actual cost basis of claiming prolongation costs.

John Molloy will trace the concurrent developments in Hong Kong in this regard, and explain how the wording of the contract in Hong Kong Government forms has added to the difficulty in regard to the cost or valuation debate.

Gradually I think the industry has accepted that the correct means of evaluating prolongation costs is by reference to actual expenditure, and it is submitted that the correct approach is that delay costs arising from variations should be claimed and paid on the basis of actual loss or expenditure incurred. However, the idea of recovering prolongation costs by adjusting rates in valuing variations persists. Whether this is a tenable arrangement depends upon the exact terms, and with regard to Hong Kong, John Molloy will comment further.

Before leaving this matter, I think it worth mentioning that there is often confusion as to the need to obtain an EOT before being entitled to recover prolongation costs. I think it fair to say that few forms of contract have any provisions which require an appropriate EOT as a condition precedent to recovering delay or prolongation costs. This matter was dealt with in the case of Fairweather & Co Ltd v London Borough of Wandsworth (1985) 30 BLR 26. It should be said that whilst the judge in that case made it clear that the provisions in the contract (the JCT form was used) did not have any nexus between EOT and the entitlement to delay costs, which are dealt with separately under Clauses 23 and 11(6), there is nevertheless a clear concurrency in terms of the evidence required to prove each. Nevertheless, the point which should be made here is that having got an EOT albeit under inappropriate sub-clause, there would be no need to arbitrate that particular point before engaging on claims under Clause 11(6) or 24.
This is not the case in some contracts, and the Australian AS forms are examples where an appropriate EOT is a condition precedent to obtaining delay costs.

A brief review of other forms in general use outside Hong Kong is as follows:-

**JCT80**

The principles in the 1963 form have been maintained in the JCT 80 series and subsequent forms save that it is now more clear that the Contractor shall be entitled to loss and/or expense following the occurrence of a relevant event, which includes the issue of an Architect’s Instruction under clause 11.

**FIDIC 4th**

Under FIDIC 4th Edition, Clause 52.1 the Engineer is entitled to value variations on a similar basis to that expressed in Clause 11(4) of the JCT 63 form (i.e. BQ rates; using rates as a basis; and agreeing a rate with the Contractor).

Under Clause 53.1 the Contractor is required to give notice of his intention to claim “any additional payment pursuant to any Clause of these Conditions or otherwise...”. There is no specified list of relevant events under FIDIC. Nor does the clause specify whether the payments claimed should be on the basis of cost or of value.

**ICE 5th**

Under ICE 5th edition, the basis upon which the Contractor is to be compensated is more specific.

Clause 13 provides that where the Contractor has been delayed or disrupted due to instructions or directions of the Engineer which cause him to incur “cost” beyond that which was anticipated at tender, he shall be entitled to be reimbursed the same.

“Cost” is defined in the Contract as “deemed to include overhead costs whether on or off Site except where the contrary is expressly stated.”

Thus it would seem clear that the intention under the ICE 5th edition is that the cost of prolongation caused by a variation shall be claimed and paid on the basis of actual cost incurred.

**The SIA Form of Contract**

This form, drafted by Duncan Wallace, specifically makes no provision for delay costs (or loss and expense) to be paid under the contract. The intention is that delays caused by variations are priced into
the cost of the variations. Delays caused by other relevant events are not covered under the payment provisions and the contractor has no choice but to arbitrate in order to recover them.

**HK Government Form – Head Office Overheads**

Whilst the evaluation of prolongation costs under the Hong Kong form is to be dealt with by the next speaker, I would like to deal with one further aspect which is relevant under the Hong Kong government and similar forms. That is in respect of the recovery of head office overheads in the event of delay.

GCC Clause 63 provides thus:–

“If upon written application by the Contractor to the Engineer the Engineer is of the opinion that the Contractor has been or is likely to be involved in expenditure for which the Contractor would not be reimbursed by a payment made under any other provision in the Contract by reason of the progress of the Works or any part thereof having been materially affected by ... ...

...  

...  

then the Engineer shall ascertain the Cost incurred and shall certify in accordance with Clause 79”

The definition of Cost under Clause 1 provides

“Cost means expenditure reasonably incurred including overheads whether on or off the Site and depreciation in value of Constructional Plant owned by the Contractor but excluding profit.”

The word expenditure does not accord with the term “direct loss and/expense” used in JCT 63 or the HKIS Form. The definition of expenditure is “The action or practice of expending; disbursement; consumption” and the definition of expend is to pay away, to lay out, spend money”. The salient difference is that the term “loss” is excluded. Loss means (inter alia) detriment or disadvantage resulting from a change of conditions”. The word loss clearly could encompass an opportunity cost such as a formula based loss in head office overheads, which would a sum of money which had been denied because of the ongoing involvement in the project due to delaying events.

However it does seem unlikely on the terms set out in the Government forms that it truly contemplates the recovery of anything other than sums actually paid out by the contractor, this would preclude the recovery of opportunity costs.

Such an approach would be consistent with other forms of contract in use, e.g. the Australian contracts talk about delay costs and the courts have distanced themselves from the approach taken by the UK courts in likening costs or loss and expense to damages at law. They say that the term cost or expense
or loss should be construed strictly and in accordance with the contract and not taken to mean the same as damages. That in effect means that cost etc means literally money paid out by the contractor, it cannot embrace loss.

Under UK law, the term direct loss and/or expense is taken to include loss of opportunity. This was made clear in the case of Wraight Ltd v P H T Holdings (1968) 13BLR26. The words “direct loss and/or damage caused to the Contractor by the determination in Clause 26(2)(b)(vi) of the (JCT form of) contract should be given the same meaning as they would have, for example, in the case of breach of contract or other question of the relationship of a fault to damage in a legal context. Accordingly, Wraight were entitled to recover that which they would have obtained if the contract had been fulfilled in the terms of the picture visualized in advance but which they had not obtained, and could not obtain under the contract, because of the determination.”

This approach then would apply to the wording used in the JCT forms of contract and the HKIS form.

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PROLONGATION CLAIMS
COST OR VALUE?

By
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1. INTRODUCTION

1.1. The previous session by Michael Charlton has examined the manner in which prolongation claims have been assessed historically and how they are being assessed in international forms of contract.

1.2. This session looks particularly at Hong Kong Government General Conditions of Contract, for two reasons:

1.2.1. Firstly, of course because it is the form of contract most commonly used in Hong Kong, and so its provisions are the ones that most construction professionals will need to be fully conversant with in Hong Kong.

1.2.2. Secondly, and probably more importantly for this debate, because it seems to be that it is under this form of contract that there is a significant divergence of opinion as to whether prolongation should be assessed as Cost or Value.

2. COST OR VALUE

2.1. So why does this matter? Well it matters because assessments on the basis of cost or the basis of value are entirely different bases for arriving at a monetary value for the effects of prolongation of the time for completion of the Works.

2.2. As Michael Charlton has described more fully in the previous session:

2.1.1. Cost, as defined in General Conditions of Contract Clause 1 is expenditure reasonably incurred by the Contractor as a result of the prolongation, it excludes profit and is not intended to included losses (although there is some debate about this).

2.1.2. Value on the other hands is an assessment made by reference to the rates in the Bills of Quantities (normally rates for general items in Preliminaries or General Bill). Such rates include profit, and an assessment of prolongation may of course bear absolutely no resemblance to the actual costs that the Contractor has incurred due to the prolongation.
2.3. Accordingly widely different monetary assessments can be arrived at depending upon whether the prolongation is assessed by reference to cost or value, and it is for this reason that arguments between Contractors and Quantity Surveyors or Engineers are common (and for this reason that firms such as James R Knowles (Hong Kong) Ltd. Keep in business!)

3. HISTORICAL DEVELOPMENT

3.1 So why is there confusion? How has it arisen. Well to fully understand the problem and see how it has arisen I think that it is interesting to see how the provisions for the monetary assessment of the effects of prolongation of the time for completion of the works have developed through the revisions to the Government forms of contract.

3.2. The earliest form of contract I could find is the Government 1971 Edition of the GCC.

3.2.1. The starting point for the assessment of the monetary effects of prolongation was (and is today) the extension of time clause. In this contract Clause 63 and in particular sub-clause (6) provides:

“Any extension of time granted by the Engineer to the Contractor shall except as provided elsewhere in the Contract be deemed to be in full compensation and satisfaction for and in respect of any actual or probable loss or injury sustained or sustainable by the Contractor in respect of any matter or thing in connection with which such extension shall have been granted and every such extension shall exonerate the Contractor from any claims or demands on the part of Government for or in respect of any delay during the period of such extension but not further or otherwise nor for any delay continued beyond such period.”

3.2.2. Accordingly it is only where the contract expressly provides elsewhere that the Contractor is entitled to reimbursement for the effects of the granting of an extension of time. In this edition there are two clauses that expressly make such provision:

3.2.3 GCC Clause 56 – Suspension of Work – entitlement to reimbursement of extra cost in the event that the works are suspended. Unlike modern versions of the GCC cost is not defined separately, but the sub-clause (2) provides entitlement to:

“The extra cost including all running wages to be paid on the Site, salaries, depreciation and maintenance of Constructional Plant, Site oncosts and general overhead costs of the Contract incurred by the Contractor in giving effect to the instructions of the Engineer under this clause shall be borne and paid by Government.”
3.2.4. **GCC Clause 59 – Possession of Site** – provides entitlement to reimbursement of expense in the event that the Employer causes delay as a result of failure to give possession of the site in accordance with the Contract. There is no definition of expense and it is probably same as ‘cost’. There is however some argument about this as in the case of **Re: Stratton’s Deed of Disclaimer (1957)** the court considered that the word ‘expense’ should be defined as the Oxford Dictionary definition being “cost or sacrifice involved in any course of action”. A sacrifice is of course a loss and so if this definition is adopted the word expense may be read as loss and expense. The Clause provides:

“If the Contractor suffers delay or incurs expense from failure on the part of Government to give possession in accordance with the terms of this clause the Engineer shall grant an extension of time for the completion of the Works as the Engineer may consider necessary and certify such sum as he considers fair to cover the expense incurred which sum shall be paid by Government to the Contractor.”

3.2.5 These are the only two clauses in the 1971 Edition of the GCC that provide expressly for assessment of the monetary effects of prolongation. So what about delays caused by variations?

3.2.6. This form of Contract recognized two different types of variations requiring valuation – Additional Works and Extra Works. Both these terms were defined in GCC Clause 1 as follows:

“Additional Works means all such works which in the opinion of the Engineer are of a character similar to those contemplated by the Contract and which can be measured and paid for under the items in the Bills of Quantities or Schedule of Rates.”

“Extra Works means all such works as are not, in the opinion of the Engineer of a character similar to those contemplated by the Contract and which cannot be measured and paid for under items in the Bills of Quantities or Schedule of Rates.”

3.2.7. **GCC Clauses 72 to 76 provided for the valuation of Additional and Extra Works.** Predictably Additional Works were to be valued at Bill Rates and Extra Works at rates agreed between the Engineer and the Contractor (presumably at ‘fair rates’).

3.2.8 Therefore whilst provision could have been made for the effects of prolongation in the valuation of Extra Works it could not have been made in the valuation of
Additional Works because such had to be valued at Bill Rates. Accordingly it does not appear to have been the intention of the Contract that the effects of prolongation would be valued within the valuation of the Additional or Extra Works themselves.

3.2.9. However GCC Clause 73(1) provides:-

“If the nature or amount of any omission or addition relative to the nature or amount of the Works or to any part thereof shall be such that in the opinion of the Engineer the rate contained in the Contract for any item of the Works is by reason of such omission or addition rendered unreasonable or inapplicable then a suitable rates shall be agreed upon between the Engineer and the Contractor.”

3.2.10. and it is under this clause that Engineer’s traditionally dealt with the effects of prolongation arising from variation orders by adjusting the rates or sums for items contained in the Preliminaries Bill of the Bills of Quantities. Whether it was the intention of the Contract draftsman that this clause be used for such purpose is unclear. The clause is certainly wide enough to do so, and in this form of contract there was nowhere else to do it.

3.2.11. However valuing the effects of prolongation caused by variations under this provision lead to inconsistency in that prolongation was assessed as:

3.2.11.1. Cost where delay was caused by suspension.

3.2.11.2. Expense where delay was caused by late possession of site.

3.2.11.3. Based on contract rates (and thus including profit) where delay was caused by variations.

3.3. The next revision of the Government form of Contract was the GCC 1977 Edition. This edition provided similar provisions to the 1971 Edition in respect of suspension and possession of site as follows:

3.3.1. GCC Clause 58 – Suspension of Works as previous edition gave the Contractor an entitlement to extra cost, and the clause itself set out the common heads of such a claim.

3.3.2. GCC Clause 61 – Possession of Site again as previous edition gave the Contractor an entitlement to expense.
3.3.3. However the contract added an additional clause dealing with the monetary effects of prolongation at GCC Clause 78 where provision was made to reimburse the contractor the loss and expense that he incurred as a result of disturbance to progress resultant from:

(a) the Contractor not having received in due time necessary instructions, Drawings, details or levels from the Engineer for which he specifically applied in writing on a date which, having regard to the time for completion of the Works prescribed by clause 62 or to any extension of time then granted by the Engineer, was neither unreasonably distant from nor unreasonably close to the date on which it was necessary for him to receive the same; or

(b) the opening up for inspection in accordance with clause 56 of any work covered up or the testing of any materials or workmanship in accordance with clause 53 unless the inspection or test showed that the work, materials or workmanship were not in accordance with the Contract, or

(c) any discrepancy between the Drawings and/or Bills of Quantities or Specification; or

(d) delay on the part of tradesmen and others engaged by Government in executing work not forming part of the Contract; or

(e) late delivery of material or plant by Government;

3.3.4. This clause is of course very similar to the one that appears today as GCC Clause 63.

3.3.5. There was again no mention of how to assess the monetary effects of delays caused by variations, as the Contract contained the same provisions for valuing the Additional Works and Extra Works as had been contained in the previous version. However like the previous version the contract contained at GCC Clause 74(4) the same provision to amend other rates in the contract if the nature or amount of the variation rendered the rates unreasonable or inapplicable, and it was to this clause that Contractors and Engineers turned to value the monetary effects of prolongation caused by variations.

3.3.6. Accordingly the provisions for assessing the monetary effects of prolongation were even more inconsistent under this form of contract that the previous version in that the assessment was:
3.3.6.1. Cost where delay was caused by suspension.

3.3.6.2. Expense where delay was caused by late possession of site.

3.3.6.3. Loss and expense where there was disturbance caused by the events set out in Clause 78

3.3.6.4. Based on contract rates (and thus including profit) where delay was caused by variations.

3.3.7. All in all a very confusing and inconsistent state of affairs.

3.4. It is probably not surprising that it was on this 1977 Edition of the Government GCC that Government found itself in its first ever construction arbitration. That case showed up the flaws in the Contract and the Government thereafter set up a Standing Committee for Conditions of Contract with a view to completely re-drafting the conditions of contract. Interesting it also set up at the same time a Working Party to draft a new Civil Engineering Standard Method of Measurement and this may have had an influence on the amendments made in the 1985 Edition.

3.5. The results of this exercise was the GCC 1985 Edition. This was considerably amended from the 1977 version and is largely the same as the current version of the Government conditions that is being used today.

3.6. The conditions regarding the monetary assessment of prolongation, whilst similar to those in the previous versions were significantly tidied up for consistency.

3.6.1. GCC Clause 48 – Possession of Site – gave entitlement to reimbursement of Costs where non possession resulted in delays to the Works.

3.6.2. GCC Clause 54 – Suspension of Works – gave entitlement to reimbursement of Costs where suspension resulted in delays to the Works.

3.6.3. GCC Clause 63 – Disturbance to progress gave entitlement to reimbursement of Costs where progress was disturbed as a result of the matters set out therein. The list of matters giving entitlement was almost identical to that included in the 1977 Edition, but significantly included at sub-clause (b) for disturbance caused by:

“any variation ordered in accordance with Clause 60,”
3.6.4. The inclusion of a definition for Cost in GCC Clause 1(1), coupled with the addition of variations in GCC Clause 63(b) appeared prima facie to have entirely resolved the inconsistencies of the previous versions of the GCC and made the provisions for the assessment of the monetary affects of prolongation clear and simple.

3.6.5. However, nothing in construction contracts is ever clear and simple and a detailed review of the documentation revealed that this was also the case here. The problems that have arisen have done so because GCC Clause 61 concerning the valuation of variations contains almost the same wording as the previous versions, i.e. the sub-clause:

“Provided that if the nature or extent of any variation ordered in accordance with Clause 60 relative to the nature or extent of the Works or any part thereof shall be such that in the opinion of the Engineer any rate contained in the Contract for any item of work is by reason of such variation rendered unreasonable or inapplicable then a new rate shall be agreed between the Engineer and the Contractor for that item, using the Contractor rates as the basis for determination.”

that Contractors and Engineer’s have been using to assess the effects of prolongation caused by variations by adjusting the rates in the Bills of Quantities.

4. THE TWO SCHOOLS OF THOUGHT

4.1. The wording of the current Government forms of contract has lead to two schools of thought regarding the assessment of the monetary effect of prolongation. These are:

4.1.1. That all prolongation (including that caused by variations) should be assessed as Cost.

4.1.2. That prolongation for late possession, suspension, and matters referred to in GCC Clause 63 except variations should be assessed as Cost, but that prolongation caused by variations should first be assessed using the rates in the Bills of Quantities (and particularly the Preliminaries Bill), and only where the Contractor can show that he has incurred more money than is being reimbursed by such an assessment would he then be entitled to a top up to reflect his actual costs.

5. ARGUMENTS AND ANSWERS

5.1. The first school of thought, i.e. that all prolongation should be assessed as Costs, is supported by the following points:
5.1.1. GCC Clause 63(b) expressly provides for assessment of delays caused by variations. This was an addition from the previous version – why include it at all if it was intended to maintain the previous system of valuing prolongation by reference to the rates in the contract.

5.1.2. Proponents of the alternative school of thought argue that the purpose of GCC Clause 63(b) is to ensure fairness on a contractor who has under-priced his BQ rates to ensure that he is not reimbursed less than his Cost. However this is a ‘win-win scenario’ for the Contractor and entirely unfair on the Employer as there is no cap at the level of Costs for a Contractor who has over-priced his BQ rates.

5.1.3. Assessing all prolongation by reference to Costs is consistent. It does not appear to make sense to assess delays caused by (say) suspension as Costs and delays caused by Variations on a value basis, i.e. one including profit on the other not.

5.1.4. Assessing the effects of prolongation in any other way would make a nonsense of the notice provisions and the Contractor would not know whether he was incurring costs not reimbursed elsewhere until all variations valued, and thus not need to serve notice until that time. This would negate the entire purpose of notice.

5.2. The second school of thought, i.e. that prolongation should be assessed as value for variation orders with top up under Clause 63 if value less than Costs and Costs for all other delays is supported by the following points:

5.2.1. The proviso to GCC Clause 61 remains in place, i.e. the clause which previously provided for the ‘valuation’ of prolongation is retained in this form of contract. Why if the intention was not to continue to assess prolongation caused by variations by value.

5.2.1.1. The counter argument to this is of course that the proviso to GCC Clause 61 can (and maybe should only) be used for matters other than prolongation.

5.2.2. When read together Clause 63(b) is intended to be fair to contractors to act as a top up to ensure that the Contractor does not receive less than his costs in the event that he has under-priced his BQ rates.

5.2.2.1. The counter argument to this is set out above, i.e. the lack of reciprocity for the Employer if the Contractor has over-priced.

5.2.3. Because GCC Clause 63 provides:
“If upon written application by the Contractor to the Engineer the Engineer is of the opinion that the Contractor has been or is likely to be involved in expenditure for which the Contractor would not be reimbursed by a payment made under any other provision in the Contract by reason of the progress of the Works or any part thereof having been materially affected by:”

and only other place payment could be made would be under GCC Clause 61. Therefore intention is to value as much as you can do under Clause 61 and top up under Clause 63.

5.2.3.1. However the counter argument to this is that Clause 78 in the 1977 version contained exactly the same wording where variations were not included in the clause, and

5.2.3.2. In any event such may well be interpreted as being in regard to the percentage overheads and profit in each rate, and the need to make adjustment in respect thereof that Michael Charlton has already referred to.

6. CONCLUSION

6.1. Whilst it is my opinion that the intention of the Government forms is that all prolongation should be assessed as Costs, I must accept that the position can nonetheless be reasonably argued both ways.

6.2. This is clearly unsatisfactory because it can lead to wildly different assessments and thus expectations.

6.3. Other local forms of contract maybe learn from mistakes in Government forms. For example KCRC Clause 56.3 on valuation of variations provides

“Insofar as, in the Engineer’s opinion, any balance of the Contractor’s claim pursuant to the provisions referred to in Clause 56.1(a) or (b) relates to disturbance to the progress of the Works or any part thereof, he shall assess and decide the balance pursuant to Clause 57.”

6.4. And thus clarifies the position that the effects of prolongation cause by variations shall be assessed as Costs under the relevant clause.

6.5. It is clearly time the Government removed the confusion arising from their Contracts by including similar provisions and thus putting this argument to a long overdue bed.

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“PROLONGATION CLAIMS IN CONSTRUCTION CONTRACTS – COST OR VALUE?”
“PROLONGATION CAUSED BY VARIATIONS SHOULD BE VALUED NOT ITS COST ASCERTAINED”
by
John Battersby, FInstCES, FGIS, FASI, FCIOB, FHKICM, MRICS, MHKIS, FCMI, FCIArb, FHKIArb, MAE, Group Managing Director of BK Asia Pacific Limited

1. Introduction

1.1 Once upon a time there was a construction industry in which there were no lawyers, no claims consultants, no delay analysts, no forensic analysts, no mediators and only a very few adjudicators and arbitrators. This was because there were virtually no disputes on which such people could feed. The few adjudicators that were around tended to be appointed on standby to resolve disputes about set-off between main contractors and specialist sub-contractors. The very few arbitrators that were around tended to be retired civil engineers (or the occasional architect) who tended to be involved in the occasional technical dispute.

1.2 In those days, extensions of time did not appear to cause too many problems, probably because contractors got on with their work and it was usually obvious when they were being held up, say by a change of design or additional work. Of course, designs were not so complex in those days but at least they were more often complete and could actually be built. Moreover, personal computers had not been invented so programmes could be prepared by experienced builders and engineers because they could be drawn by hand.

1.3 Claims for additional payment very rarely arose either. This was because Engineers and Quantity Surveyors measured the works and valued variations proactively (i.e. soon after the instructions were issued) so that appropriate amounts could be included in interim certificates as the work progressed. Preliminaries and site overhead / on-cost percentages were also adjusted as a matter of course to reflect the time effects of variations.

1.4 Consequently, no one talked about “critical paths”, “dominant delays”, “concurrent delays”, “global claims”, “cause and effect”, “further and better particulars”, “as-planned impact”, “time slice analysis”, “delay analysts” and so on.

1.5 It seems to me that, when it comes to prolongation claims we have lost sight of the objectives of the Employer and the Contractor when they enter into the Contract which should be to construct the works on time, within budget, to the standard of quality specified and for the contract price, which should be properly adjusted to take account of necessary extras, in accordance with their Agreement.
2. Extensions of Time do not give an automatic right to Prolongation Costs

2.1 Notwithstanding the fact that the extension of time provisions may be to the benefit of the Employer, in that they protect the Liquidated Damages provisions in the event of delays for which the Employer is responsible, and should therefore be operated properly, many Architects and Engineers are reluctant to perform their duties in this regard because they consider the Contractor will automatically have a valid claim for additional payment for prolongation. This should not be the case. Under most contracts, an extension of time does not give an automatic right to prolongation costs.

2.2 Prolongation claims have to be considered separately from extensions of time. Just as the Employer cannot profit from LDs during a period of Contractor’s culpable delay if he too has prevented completion, the Contractor also cannot recover damages in respect of an extension of time if he has caused concurrent delay as demonstrated in Figure 1.

3. Delay Effects – Valuation or Cost Reimbursement?

3.1 Where a contract provides for variations to be valued at contract rates, except in the case of changes in character and conditions, there is normally a provision whereby varied rates have to be based on the contract rates or analogous thereto. This means that if there is a pricing error in the contract rates then this must be perpetuated in the varied rate.

3.2 For example, if the estimate for labour costs has been based on HK$600 per day in the
tender but the real cost is HK$900 per day, the value of the variation must also be built up on the basis of HK$600 per day. Although, in the case of some contracts, losses due to variations can sometimes be recovered (e.g. the HKIA Contract), unfortunately for contractors, this is not the case under all forms of contract (e.g. the Government Contract).

3.3 Such a rule can of course work in the Contractor’s favour. If, using the last example, the labour costs had been estimated in the tender at HK$1,200 per day, the Contractor would be entitled to be paid at HK$1,200 per day for all variations which the Contract required to be valued on the basis of Contract rates.

3.4 Such rules do not apply to the assessment of claims.

3.5 By “claims” I mean claims for additional payment caused by claimable events other than variations.

3.6 This is a huge subject and not one for this presentation except to the extent relevant to prolongation claims.

3.7 Common causes of claims on a building or engineering contract are as follows:

- Late drawings and instructions.
- Interference by other contractors.
- Rectifying defects caused by design faults for which the Employer is responsible.
- Unforeseen ground conditions.

3.8 The assessment of claims is quite different to the valuation of variations. Claims are assessed on the basis of additional cost or expense or loss. Variations are normally valued on the basis of the value of the work at the level priced in the contract.

3.9 Furthermore, loss and expense has to be proved. Variations are valued on the basis of extra work carried out or services provided whether or not the Contractor has actually suffered loss. This can be important when deciding whether a claimable event should be pursued as a claim or a variation.

3.10 For example, if a design is not workable and has to be varied and the Contractor is kept standing for a month waiting for revised drawings, many Contractors will automatically claim for the cost of standing. While that may be successful in recovering the direct cost of labour and plant it may not recover overheads and profit if it can be shown that the Contractor had no alternative work in any event and has therefore suffered no loss from
his idle resources. If however the claim was advanced as a variation, the timing of its issue should be taken into account and the standing resources valued as part of the variation. Such valuation would also include overheads and profit.

3.11 A word of warning however. As mentioned earlier, the basis of valuation of variations is contract rates. If these have been underpriced, the resultant valuation might be less than a claim for costs.

3.12 The important thing to remember about claims is that “cause” must be linked to “effect “. If you cannot do that the claim will fail.

3.13 For example, if the cost of delay caused by the late instructions is claimed as under the previous example but, at the same time, the resources were standing idle due to bad weather conditions which caused the Works to be suspended because of safety considerations, it would be argued that the idling was not caused by the late issue of drawings. Such idling would have taken place in any event. When valuing variations, concurrent delays do not have the same negative impact.

4. Valuation of Prolongation in cases of Concurrent Delay

4.1 It is normally accepted that, if a variation causes delay to progress and contract completion is extended as a result, the prolongation of the Contractor’s resources over the extended period should be paid for as part of the valuation of the variation and, possibly, as a claim for reimbursement of additional costs.

4.2 Even in circumstances where the completion date has been delayed by matters for which the Contractor is responsible but is nonetheless prevented from being achieved by variations, the Contractor should be paid for the amount of prolongation necessitated by variations.

4.3 For example, if the Contractor suffered from a strike which delayed the delivery and therefore the installation of E & M equipment thereby preventing completion of the Works until say 5 months later than the due date for completion but, at the same time, could not carry out such work as a result of variations, thereby preventing completion until say 5 months later than the due date, the Contractor would still be entitled to be paid for the value of prolongation which could not have been avoided as a result of variations. This would be the case whether or not the overrun necessitated by variations is 4 months (see Figure 2), and therefore not considered to be the critical or the dominant delay) or 6 months. Any other result would give the Employer the free use of the Contractor’s resources to execute variations, contrary to the requirements of most valuation clauses.
4.4 However, in the circumstances illustrated in Figure 2, the Contractor would not be reimbursed any additional expenditure to which he might otherwise be entitled under a loss and expense clause because his resources would have been detained on site in any event due to the strike.

5. Periods of Prolongation for Assessment of Cost or Valuation

5.1 A question which often arises is: should the valuation of prolongation, or ascertainment / assessment of its cost, relate to the period when the delay to progress occurs or the period over which the employment of the resources is extended or prolonged?

5.2 This is a question of “cause and effect” and should be answered accordingly. For example, if a tower crane becomes idle because work on a structure on which it is employed comes to a standstill while the Architect re-designs a floor then the hire of the tower crane and employment of its operator should be valued, or their cost should be ascertained, over the period of idling which is the extra cost because such idling has not been allowed in the contract price. However, in such circumstances, the general site overhead or preliminary items which are employed on the project as a whole, such as project manager, safety officer, insurances etc, will not be the subject of the valuation or claim for idling because they are continuing to function as normal. It is only if, and when, the project as a whole is extended or prolonged beyond its programmed completion period as a result of the delay to the progress of the structure that the Contractor would be involved in the extra employment of resources over and above that allowed in the contract price. Therefore it is that prolongation (during the extended period(s) of employment of resources) which should

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**Figure 2**

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**PROLONGATION ARISING FROM ORDERED VARIATIONS DURING PERIOD OF CONTRACTOR'S CULPABLE DELAY**
be valued (or its costs ascertained) as part of the variation which caused the idling of tower crane during the earlier period referred to above even though the idling of the tower crane itself will have been valued (or its costs ascertained) over the earlier period.

5.3 A typical profile of a Contractor’s on- and off-site overhead resources is illustrated in Figure 3. It should be noted that the cost or value of such resources is very much lower during the planning and procurement and mobilization periods in the early part of the construction period and during the period towards the end of the construction period when resources are demobilized than they are when the project is in “full swing”.

5.4 When there is a delay to progress for which the Employer is responsible and which will impact on completion, the Contractor will be entitled to an extension of time. Such extension will be granted to the completion date existing at the time the extension is granted because the duration of the construction of the Works is likely to be prolonged beyond the date for completion in the Contract. However, if all the Contractor’s on and off-Site overhead resources employed during the period of prolongation of the project as a whole are automatically assessed or valued for the prolongation claim this is not likely to reflect the actual real cost or value of prolongation. This is because some of the prolongation of the Contractor’s overhead resources is likely to occur at the level of cost or value of the resources employed by the Contractor at the time the delay to progress occurs or, where general overhead resources were programmed to be demobilized prior to completion, at times prior to the period of prolongation of the project as a whole.
5.5 **Figure 4** below illustrates the likely impact of delays on a Contractor’s on and off-site overhead resources. It should be noted that not all resources for all trades are necessarily prolonged as a result of delays to the progress of particular trades even though such delays to progress prolong the construction period overall. In the illustration in **Figure 4**, the histogram shows how it would be wrong to assess or value prolongation at the level of cost or value in the middle of the project (shown “x”) or at the levels prevailing during the actual prolongation of the construction period overall (shown “xx”). The actual effects of prolongation on the cost or value of the Works are quite different (shown “√”).

| Activity Description | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| Construction Management |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Planning / Progress Control |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Procurement |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Engineering |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| BS Coordination |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Structure Supervision |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| BS Supervision |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Finishing Supervision |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| QS / Cost Control |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Safety / Security / Quality Assurance |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tower Crane |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Scaffolding |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Hosts |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Plant |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Accommodation |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| General Labour |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Head Office Services |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Delays to Progress |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| - to structure |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| - to BS |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| - to finishings |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Extension of time |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

5.6 However, it may be the case that, when delays occur during the early stages of a project, the Contractor is already committed to the subsequent mobilization of resources (see “A” in Figure 4) such that the effects of prolongation on cost or value is actually greater than the level of cost or value prevailing at the time the delay to progress occurs.

5.7 Furthermore, where concurrent delays, for which the Employer is responsible, occur, it is likely that elements of the Contractor’s on-and off-site overhead resources will be prolonged even though the construction period overall is not prolonged. For example, in the illustration contained in **Figures 3** and **4**, if the structural works (say on the roof or externally) were delayed by a further two months but did not affect the progress of the building services or finishing trades inside the building, it is likely that an additional two months of cost or value for the structure supervision and plant and possibly engineering and tower crane should be included in the prolongation claim.

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