PROLONGATION COSTS: WHERE NOW AFTER *COSTAIN v HASWELL*?

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Introduction

Delays to completion of construction projects are commonplace, as are claims from contractors to recover additional costs incurred as a consequence of those delays. Detailed judicial analysis or discussion of the principles upon which such claims might be advanced or valued, particularly of claims to recover the contractor's site running costs, is comparatively rare, largely because these claims tend to be settled through adjudication. The decision in *Costain v Haswell* is of interest because it contained some detailed consideration of claims to recover contractor's site overheads arising from delays, of a 'winter working' claim, and of the nature of proof required for such claims.[1] Whilst much of that decision depends on the facts, some statements of principle made in the decision, if followed, would suggest that significant changes are required to conventional understanding as to how claims for costs arising from delays to completion, also referred to as prolongation costs, should be assessed.

Claims to recover prolongation costs arise in a number of contexts, and hence it is of some importance for parties to understand the principles upon which such claims might be evaluated. First, such claims might be made by the contractor against the employer under the construction contract. Second, a claim might be advanced by a contractor against subcontractor or supplier to recover losses arising from delays. Third, as occurred in *Costain v Haswell* itself, such a claim may form part of a professional negligence action, where the alleged negligence is said to have resulted in delays to completion of a project, with the consequent need to settle claims for additional cost with the contractor.

In this paper the term 'prolongation costs' is used to describe the loss incurred by a contractor, and in particular the additional site running costs incurred, arising from delays to completion. This loss might be differentiated from more limited losses (sometimes termed disruption) arising from delays to discrete elements of work that do not lead to delays to completion of the works overall. A similar definition of delay in this context is used in the leading construction law texts *Hudson*[2] and *Keating*.[3]

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1 *Costain Ltd* v *Charles Haswell & Partners Ltd* [2009] EWHC 3140 (TCC), [2010] TCLR 1, 128 Con LR 154.

2 Atkin Chambers, *Hudson's Building and Engineering Contracts* (12th edition Sweet & Maxwell, London 2010), paragraph 6-069.

What are prolongation costs?

When a delay is incurred to a construction contract, assuming it is a critical delay (meaning that it will cause a delay to the date for completion), a number of consequences follow. First, the activity or activities most directly involved will be delayed. Other activities may be able to proceed unaffected. That may mean that some, but not all, subcontract works are affected. Second, the delayed activities will usually delay those which follow. This may mean that project work that was due to be completed during the warm summer months, for example, must necessarily be carried out in a winter season with fewer available daylight hours. The effects can be significant on projects that must be carried out within defined weather conditions or outside winter months, as is frequently the case on civil engineering projects. Third, if the project's duration is extended, the site management team and plant and site accommodation will need to remain on the site for a longer period, through to the end of the project. Fourth, it follows that the date at which the site management team will be released to the next project will also be delayed. Fifth, there may be some increased involvement by head office staff in managing the consequences of the delays. Sixth, the contractor might propose, or instigate, some programme or resource changes aimed to limit or reduce the likely delay.

The claims which may arise from a delay can be classified as follows:[4]

1. *Increased site running costs or 'site overheads'*. This is typically the cost of site-based staff, accommodation and some plant being retained on the site for a longer period. In *Ascon* v *McAlpine* there was some discussion about calculation and proof of claims for site overheads, but no more recent detailed judicial discussion of such claims is evident.[5]

2. *Increased costs to complete the works that would not have been incurred, had no delay occurred*. This might be presented as a claim for the additional cost of winter working, or adverse exposure to currency exchange fluctuations.

3. *Additional work or 're-work'*. This can arise where work done (such as painting) has to be repeated after a period of delay.

4. *Increased cost of performing other work, also termed disruption*. Typically this is the cost effect of a delay or reprogramming on non-critical work or other subcontractors, because the work affected is carried out less efficiently than would have been the case had no delays occurred.

5. *Recovery of additional management costs, typically costs of staff based at a regional or head office whose time has been charged to*

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3 Hon Sir Vivian Ramsey and Stephen Furst QC, *Keating on Construction Contracts* (8th edition, Sweet & Maxwell, London 2008).

4 See also *Hudson*, note 2,paragraphs 6-068 to 6-084; and *Keating*, note 3, paragraphs 8-048 to 8-061.

5 *Ascon Contracting Ltd v Alfred McAlpine Construction Isle of Man Ltd* (1999) 66 Con LR 119, (2000) 16 Const LJ 316 (TCC).

the project due to specific issues. Recoverability of such costs was confirmed in *Tate & Lyle Industries v Greater London Council*[6] and *Aerospace Publishing v Thames Water Utilities*,[7] discussed more recently in *Tinseltime v Eryl Roberts*.[8]

6. *Lost contribution to head office overheads, where key staff or plant is retained on a delayed project and thus cannot be released to carry out new projects that could earn overhead contributions as part of the contract price*. Discussion of this established category of claim, covered in *Hudson*,[9] is beyond the scope of this paper.

7. *Acceleration costs or other reprogramming measures taken to reduce or limit the period of delay*. See, for example, *Ascon Contracting v Alfred McAlpine*, where the rationale for the claim for acceleration was reviewed and discussed.[10] Discussion of this established category of claim, covered in *Hudson*,[11] is also beyond the scope of this paper.

The term 'prolongation costs' is used variously by different texts and sources. At its widest it can cover all of the above categories, but more typically it tends to be used to cover claims for increased site running costs only. Claims for site running costs and winter working costs were considered in *Costain v Haswell*, discussed further below.

Recovery of site overhead costs: established principles

Ordinarily, provision is made within construction contracts for increases to the contract sum to be awarded, so as to compensate the contractor for the effects of delay, in so far as money can do so. Such provisions are ordinarily conditioned so as to take effect only in respect of limited categories of causes of delays and upon the contractor fulfilling other conditions, such as providing notices or data or documents.

There are a number of possible approaches to assessing the value of additional site running costs:

1. *Agreement to the effect that no adjustment to the price should be made in the event either of specific delays events or of any delays*. This approach, whilst appearing to be one that no commercially minded contractor would countenance, is nevertheless seen in several guises. Examples include the 'no damages for delay' clause found in some jurisdictions;[12] Target Cost contracts where the pain/gain mechanism is structured so that 100% of the pain is

6 *Tate & Lyle Industries Ltd v Greater London Council* [1982] 1 WLR 149 (QB).
7 *Aerospace Publishing Ltd v Thames Water Utilities Ltd* [2007] EWCA Civ 3, [2007] BLR 726.
8 *Tinseltime Ltd v Eryl Roberts* [2011] EWHC 1199 (TCC) paragraphs [68] to [75].
9 See *Hudson*, note 2, paragraphs 6-072 to 6-074.
10 *Ascon Contracting*, note 5, paragraph [136].
11 See *Hudson*, note 2, paragraph 6-079.
12 Discussed further by *Hudson*, note 2, paragraph 6-084.

suffered by the contractor above a defined threshold; or under a 'Guaranteed Maximum Price'-based agreement. Contractors can secure insurance cover against some delay-related costs under Delay to Start-up (DSU) policies, but the policies involved tend to operate under limited and carefully defined criteria.

2. *Use of a pre-determined formula, whereby the amount payable to the contractor for delays caused by defined circumstances is an agreed sum per day or week.* A formula approach, conceptually, is unsound because the extent of loss arising from a cause may differ significantly depending upon the stage of progress of the works, number of subcontractors involved at the time etc. A delayed start to the project may involve negligible cost; a delay mid-project, however, may directly affect a multitude of subcontractors and works across the entire site. Notwithstanding this, provisions for payments at agreed rates – a liquidated amount that the contractor proposes within his tender – can be found in some standard forms: See, for example, clause 10.7 (Delay Costs) of Ireland's Public Works Contract for Building Works designed by the Employer.[13]

3. *Recovery of overhead costs as part of the agreed contract rates and prices*. Where additional work is to be valued at contract rates, the contractor may recover a contribution to overheads as part of the agreed rates. Hence, if a contractor is engaged for five weeks to build a wall 100m long, and is asked to build an additional 20m, one view is that payment for the additional 20m of wall at the contract rates will compensate for the additional week required to build the additional 20m of wall.

4. *Addition for overheads, calculated as a percentage of the value of additional work carried out*. If additional work is required, the contractor might be paid at cost for those additional works with an additional percentage allowance for site overheads, etc. This approach, taken alone, provides no adjustment to the price where the delay is caused by matters other than additional work. Notwithstanding this, reimbursement of amounts for overheads on a percentage basis is evident in some forms. Under the NEC3/ ECC form, for example, the assessed value of a compensation event includes, as part of the calculation, a percentage uplift on staff and other costs to cover overheads, and a further percentage uplift, referred to as the Fee, which is deemed to include all off-site overheads.[14]

5. *Valuation of additional site running costs based on the average amount per week of the overheads in the contract price (also known as 'Preliminaries') for each qualifying week of delay*. The term 'Preliminaries' refers to the section of a bills of quantities or

13 Department for Finance of the Republic of Ireland, *Works Contract for Building Works designed by the Employer*, Document Reference PW-CF1 v.1.6 (30 March 2010), downloadable from *www.constructionprocurement.gov.ie*.

14 *NEC3 Engineering and Construction Contract* (Thomas Telford, London 2005), clauses 11.2 (22) (Definition of Defined Cost) and 63.1 (Assessing compensation events).

tender price build-up reserved for indirect costs such as site overheads, profit and head office costs. The amounts in the Preliminaries section of the Bills are part of the contract price. Calculation of site running costs based on the prices for preliminaries provides a convenient shortcut to assessment of additional costs likely to have been incurred by the contractor as a result of the delays. This traditionally was the approach adopted by quantity surveyors to calculation of prolongation costs on modest claims, understood as a rule-of-thumb approach despite the contract's provisions requiring a more detailed cost-based assessment. On the one hand, there is a risk that the amount paid per week may bear little relation to, and may exceed by a considerable margin, the contractor's additional costs incurred arising from those delays. Going the other way, the preliminaries-based calculation might be said implicitly to contain no allowance for subcontractor's delay costs or other specific losses of the types listed above.

6. *Analysis of the additional costs incurred by the contractor as a result of the delays incurred*. This approach is adopted under the JCT forms, which provide for recovery of 'direct loss and/or expense'; and FIDIC forms, which permit recovery of 'all expenditure incurred on and off site not including profit'. Under the NEC forms, a hybrid approach is used. Under clause 63.1 the assessed value of a Compensation Event is the difference between the Defined Cost before the event and the estimated Defined Cost after taking account of the Compensation Event in question, plus a percentage Fee.

Approaches 1 to 5 are price or 'value'-based approaches to valuation. The merit of these is that no investigation into additional cost is required at all, in marked contrast to the last, cost-based, Approach 6. The difficulties with cost-based assessments are two-fold. First, there is a need to identify which costs are additional as arising from the delays involved. Second, that in turn requires some analysis of the delays, to understand which categories of cost arise as being additional and the periods over which they arise. It appears to be settled, however, that in construction litigation the amounts claimed do not need to be proved by production in court of invoices, because the invoices and documents are made available on disclosure; are available to experts; and form the basis of expert evidence. As Judge Hicks QC noted in *Ascon*: 'It is, however, unheard of in my experience for strict proof ... to be regarded as necessary in substantial construction industry litigation'.[15]

It is now well-established that valuation of site running costs based on a weekly average of the preliminaries (approach 5 above) is unlikely to be accepted by a court where a valuation based on actual cost is required. In *Ascon Contracting*, counsel for the defendant suggested that the prolongation costs might be calculated based on the average weekly amount derived from the contract preliminaries, but that approach was described by Judge Hicks QC

15 *Ascon Contracting*, note 5, paragraph [42].

as 'rough and ready' and was not accepted. The court favoured a cost-based calculation for measuring loss.[16] That decision is echoed by the learned editors of *Keating*, who note that claims for increased preliminaries are frequently made and allowed for convenience on this basis, but that in a claim for damages, the calculation should be of the actual additional costs.[17]

These various approaches are not all mutually exclusive, in that recovery under some forms is achieved under a mix of approaches. The cost of prolonged site overheads under the NEC3 ECC form is recovered through a combination of the additional actual cost of staff on site, a percentage addition to staff costs and the Fee, also on a percentage basis. Under the JCT, for example, recoveries in respect of site overheads will be achieved by contractors as part of the price agreed for variations, perhaps as a percentage addition to prime cost work and at cost within a loss and expense claim. Where, as under the JCT forms, prolongation costs are assessed on the basis of actual cost incurred, *Hudson* notes that credit may need to be given for overheads already recovered under the variation account, in order to avoid double recovery.[18]

Calculating additional site overheads

There is surprisingly little authoritative guidance or case law about valuation of claims for prolongation costs.[19] Hughes and Barber noted that it was often difficult to identify precisely the additional cost or loss and expense which is incurred as a result of a delay to completion of the works.[20]

So far as site overheads are concerned, these can be classified into three groups of cost. First are costs that are fixed, such as mobilising and demobilising plant. Second are costs that arise directly in relation to work to be carried out, typically most plant and site foremen. These are sometimes called volume-related costs, because they rise or fall in direct proportion to the volume of work to be carried out at any point in time. Where delay is incurred, the impact on this category of cost is likely to be marginal and localised. A good example of volume-related costs that might be included within site overheads is general site labour. As Judge Hicks QC noted in *Ascon*:

> 'The labour content of the contract works is not necessarily increased at all, let alone proportionately, by an extension of time. There may indeed be labour-related losses by reason of delay, for example because of down-time, loss of productivity, repetition of tasks or other uneconomic

16 *Ascon Contracting*, note 5, paragraphs [38], [47] and [48].
17 *Keating*, note 3, paragraphs 8-050 and 19-264.
18 *Hudson*, note 2, paragraph 6-074, citing *JF Finnegan Ltd* v *Sheffield City Council* (1988) 43 BLR 124 (QB, OR).
19 Noted also by *Hudson*, note 2, paragraph 6-069; and Richard Wilmot-Smith QC, *Construction Contracts Law and Practice* (2nd edition OUP, Oxford 2010), paragraph 4.34.
20 GA Hughes and JN Barber, *Building and Civil Engineering Claims in Perspective* (3rd edition Longman Scientific & Technical, England 1995), page 230.

working, but it is for the contractor to establish and quantify specific claims for losses of that kind, if they have been suffered.'[21]

The third category of costs is those that arise from resources that will need to be detained on the site for most of, or the full duration of, the project. Examples are site accommodation, key plant (such as a tower crane required for the whole works) and key staff such as a site manager and site-based engineer. This, being time-related, is the category most significantly affected by delays which delay completion of the works. This division of costs between those which are volume-related and those which are time-related is echoed by *Hudson*, *Keating* and Wilmot-Smith.

Keating notes:

> 'A claim for delay is frequently quantified in whole or in part by extending for the period of delay those items in the preliminary bill, or elsewhere in the Contract Bills, *the cost of which is affected by time*.'[22] [*emphasis added*]

Wilmot-Smith says, of claims for additional on-site overheads:

> '[These] are relatively easy to calculate. The hire of plant and site establishment can be broken down into appropriate weekly costs and then applied to the prolongation period. Sometimes contractors will present their claims on the basis of their tendered rates for on-site overheads. The true view is that the contractor's actual costs must be examined as they are the true cost to the contractor of staying on site for a period longer than it otherwise would.'[23]

In relation to claims for additional site overheads, *Hudson* says:

> 'Site or job-related overheads include the non-productive costs which a contractor will view as a necessary expenditure to carry out the works. These costs will include such items as supervision and site accommodation and will include elements of plant such as craneage and transport. It is obvious that, *if these costs are time-related*, any delay to the project will be likely to increase the cost to the contractor of undertaking the work and should be reimbursed to the extent that the Employer has caused the overall delay to the project.'[24] [*emphasis added*]

These three sources have one point in common: that claims for site overheads should be based on time-related costs.

Construction practitioners, particularly Trickey and Hackett,[25] Davison and Mullen[26] and Mastrandrea,[27] emphasise that the category of costs included in

21 *Ascon Contracting*, note 5, paragraph [39].
22 *Keating*, note 3, paragraph 19-264.
23 Wilmot-Smith, note 19, paragraph 14.88.
24 *Hudson*, note 2, paragraph 6-075.
25 Geoffrey Trickey and Mark Hackett, *The Presentation and Settlement of Contractors' Claims* (2nd edition Spon, London 2001), paragraph 4.6.2.

calculations should be time-related resources only and that calculations should be based on actual costs incurred. Some differences emerge between legal practitioners and construction practitioners over the extent to which plant might be time-related and over how plant with spare capacity should be valued.

The SCL *Delay and Disruption Protocol* was published as guidance on delay and disruption related matters.[28] It was not intended to be a contractual document, nor did it purport to take precedence over the express terms of a contract or be a statement of law, as was recently noted by Hamblen J in *Adyard Abu Dhabi v SD Marine Services*.[29] It did not contain a list of sources on which the statements within it were based. Whilst the Protocol might now be considered to be of little assistance, it noted that the contractor's cost of prolongation mostly comprises the extended use of time-related resources and that compensation for prolongation resulting from Employer Risk Events would primarily (but not exclusively) comprise the Contractor's extended use of time-related resources, notably its site overheads. These statements are consistent with other sources noted above.

Having regard to all these sources, an approach to calculation might be stated thus: in calculating an average weekly rate for site overhead costs, this should be based on actual costs incurred and limited to the costs of resources that ought properly to be classified as being time-related, excluding fixed or volume-related costs. It may of course be that claims for other isolated time- or volume-related categories of costs can be supported on the facts.

The decision in *Costain* v *Haswell*[30]

Costain was engaged as design and build contractor for a water-treatment plant. The project involved construction of ten separate buildings or structures which Costain was required to complete by a single completion date. Delays were incurred during the course of the works. After completion of the works Costain claimed damages from Haswell, its engineer, for alleged negligent design which had delayed foundations of two of the ten buildings (referred to as RGF and IW) on site.

Before completion of the trial, the parties' experts agreed that the period of delay at the time to those two buildings was 12 weeks and 4 days and that both buildings at the time were critical to completion. Their analysis of progress and delays however was reported to have been limited to those two buildings and limited to the period in which the delay occurred. Costain claimed prolongation costs in respect of that 12-week delay period. These were

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26 R Peter Davison and John Mullen, *Evaluating Contract Claims* (2nd edition Wiley-Blackwell, London 2009), page 180.

27 Franco Mastrandrea, 'Preliminaries in Construction Prolongation Claims', [2009] ICLR 428.

28 Society of Construction Law, *Delay and Disruption Protocol* (2002), downloadable from *www.eotprotocol.com*, paragraphs 1.6.1 and 1.8.1.

29 *Adyard Abu Dhabi v SD Marine Services* [2011] EWHC 848 (Comm) paragraph [289] (this case is wrongly titled *Dhabi v SD Marine Services* at www.bailli.org).

30 *Costain v Haswell*: note 1.

claimed at a rate agreed between experts of £35,000 per week for what was described as site-wide overheads.

Richard Fernyhough QC, sitting as a Deputy High Court judge, decided first that the delays were not proved; next, that the prolongation costs could not be recovered because the claimants had failed to prove that all ten buildings had been delayed; that prolongation costs could be recovered based on 13% of the agreed weekly rate (the percentage representing the two buildings in issue); and finally that credit had to be given for the contractor's receipts from the employer, which meant that no loss was suffered. The result was that Costain's claim for prolongation costs failed in its entirety.

Hence, this was a very rare case where despite agreement between experts over the delays incurred to the two buildings concerned (albeit no agreement as to progress of other buildings or relating to delays to completion) and over costs relating to delays, no costs arising from those delays were awarded.

The claim failed for want of proof in two respects:

1. The claimants, having founded their claim on costs arising from delays at the early stages of the project, had failed to prove that those delays had affected the date for completion. This was of some importance because of the possibility that delays might have been incurred on other buildings, or that delays might have been mitigated or eliminated later in the project. The failure to prove delays to completion also proved fatal to the claims in respect of head office overheads.
2. The claimants, having claimed site-wide overheads for the period of delay, had failed to prove that *all* activities across the entire site, not just the two delayed buildings, had been delayed. It was noted that the claimants might have limited their claim to the overheads relating only to the two buildings, but apparently failed to do so.

Further, it should not be overlooked that receipts from the employer in respect of the same causes as were advanced under the claim in the action meant, in summary, that Costain had not proved it had suffered any loss.

The decision in *Costain* was, undoubtedly, one largely based on the facts. There are nevertheless judicial statements made, even if *obiter*, which are of general application on points that have rarely been considered judicially: these are now reviewed in further detail.

The claim for winter working

Costain made a claim for losses from reduced efficiency from carrying out work in winter months that, but for the delays, would have been carried out during the autumn period. The claim was based on the notional basis that work after 1 October 2003 would take 1.33 times longer, being in the winter period, which added up to an additional 14-day period for which time and prolongation costs were sought. The claim was dismissed because it was

found to have no solid basis save for meteorological records and the expert's opinion, hence was found to be wholly theoretical.[31]

The decision in this case can be readily understood in view of the lack of evidence. The claim might be considered unusual in that it was advanced as a notional claim for delay which in turn led to additional cost, as opposed to a claim based, say, on subcontractors' claims for reduced productivity of particular work elements. Although not discussed in this case, it is suggested, in any event, that even if the claim had succeeded in the form in which it was made, some allowance would be necessary for the compensating advantage of other work carried out in spring or summer months which would otherwise have been carried out in the less productive winter period, had it not been for the delay.

Proof of time claims – some new requirements?

Proof of delays, upon which any prolongation costs claim inevitably relies, must be achieved; but how this is achieved depends on the type of claim in hand. In *Costain*, delay experts had agreed many key matters: the programmes and dates upon which to base their analysis; that time impact analysis might be used; that allegedly negligent design issues had resulted in a delay of 12 weeks and 4 days; and those delays were critical as they were on the critical path of the project at the time. There was some disagreement over the way the time impact analysis should be carried out, but this apparently had little impact on the actual results. Notwithstanding all of this, the judge found that the experts had limited their analysis to the two affected buildings and to the time period involved; as a result, Costain had failed to show that the critical delays had pushed out the contract completion by the period of 12 weeks, or at all.[32] From this he concluded there was no basis upon which a claim for prolongation costs could succeed.

Underpinning this was an observation by the judge that the original delay might be 'later mitigated, neutralised or even exacerbated by later events'.[33] This, it is suggested, was a departure from established principles on how delays are measured or analysed. It might be questioned whether this observation can be reconciled with the concept that a delay may accrue and crystallise, unaffected by later events. Indeed, delay experts use the Time Impact Analysis methodology because it measures delays accrued as the work proceeds. If a court cannot accept that delays might not accrue incrementally during the works, claimants proving delays may be put to the burden of proving the impact of every subsequent delay event, merely to confirm that the earlier delay in issue in fact crystallised. This could result in a disproportionate burden that was never intended, and which is unsupported by authority elsewhere.

The failure to prove delay, entailing failure of the claim for damages, is a recurring theme evident in professional negligence claims. In *Mirant* v *Ove*

31 *Costain v Haswell*, note 1, paragraphs [197] to [199].
32 *Costain v Haswell*, note 1, paragraphs [176] to [179], [181] and [200].
33 *Costain v Haswell*, note 1, paragraph [181].

Arup, despite findings of breach by Arup in respect of design of foundations to a boiler house, Judge Toulmin dismissed all of Mirant's damages claims because Mirant had failed to prove that these breaches had caused Mirant to suffer a loss.[34] Failure to prove delay is also evident in claims for damages for defects. In *Castle Inns (Stirling) Ltd* v *Clark Contracts Ltd*, Lord Drummond Young decided that the claimants had failed to prove that delays to opening of a restaurant were caused by alleged defects. Nor could the court carry out an apportionment exercise because of a failure to provide a sufficient basis in evidence for apportioning delay (and loss) between the various causes: 'the absence of a critical path analysis is of the greatest importance; it is simply impossible to form a view on the relative significance of the various possible causes of delay'.[35] When a tower crane collapsed on a project in Singapore, the employer failed in its action against the plant hire company to prove that the claimed prolongation costs arose from the collapse; there was insufficient evidence to prove a correlation between the collapse of the tower crane and the subsequent delay of completion of the project.[36]

Costain provides a useful reminder that in an action for damages, where part of the loss claimed is prolongation costs paid to a contractor, proof of delays in the action for damages by relying on the contract's extension of time claims might not be accepted as adequate by the court. At the very least, the claimant should provide sufficient evidence to allow the court to make a positive finding that delays were incurred absent other causes. That may require an entirely new delay analysis to be performed, to prove the actual delays that arose from the alleged breaches.

Measuring losses – from what date?

The decision in *Costain* helped settle some confusion as to whether, when a delay to completion is proved, the resulting loss is measured at the point when the delay event occurred (usually mid-project) or at the end of the project in the 'extended' period? This point might not arise at all, where a contractual regime is to be followed or where a quantity surveyor has chosen to value the delay damages by using, as an approximation, an average weekly amount for preliminaries. But the point can be of great significance where notification or limitation issues arise, or where, under a bond or insurance policy, recovery is limited to costs incurred at the time of the delay but not afterwards.

The view taken by construction practitioners is that valuation of loss should be made at the point when the delay occurs. Trickey and Hackett helpfully note that when ascertaining the contractor's entitlement to additional costs, the calculation must be related to the actual costs incurred at the time the relevant delay occurred, not in the extended period at the end of the contract.[37]

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34 *Mirant Asia-Pacific Construction (Hong Kong) Ltd v Ove Arup and Partners International Ltd* [2007] EWHC 918 (TCC).

35 *Castle Inns (Stirling) Ltd v Clark Contracts Ltd* [2009] ScotCS CSOH 174, paragraph [36].

36 Tay Yong Kwang J in *Kimly Construction Pte Ltd v Lee Tong Boon (trading as Rango Machinery Services)* [2011] SGHC 26, paragraph [28].

37 Trickey and Hackett, note 25, page 152.

Davison and Mullen make a similar point.[38] This approach is supported because, as often occurs, the overheads mid-project may be high, but minimal toward the project's end.[39] If a delaying event occurs mid-project, valuation of the additional overheads in the extended period – the last few weeks of the project – might not provide an accurate measure of the loss incurred. In practice, the most pragmatic approach is to calculate an average weekly or monthly amount, this being based on actual amounts of the time-related costs incurred (not an average of the contract price allowances). That calculation should exclude those items considered to be one-off costs or items not considered to be time-related.[40] There are two benefits to this approach: the average includes the amounts involved, but avoids fluctuations arising from month to month through accruals or irregular invoicing; and the average assists a court to makes its own calculation of damages.

Hudson is silent on this point. *Keating* contains the following passage, which some take to understand that valuation should be carried out in the extended period:

> 'It should be noted that ordinarily prolongation costs will only begin to be recoverable from the Completion Date. A provision either in the Bills or in the Contract's Programme which provides for an earlier Completion Date but which does not form part of the Contract does not give rise to any time related contractual obligation. The Contractor cannot therefore claim prolongation costs commencing upon his programmed Completion Date if it is earlier than the Date for Completion stated in the Contract.'[41]

In support, *Keating* refers to *Glenlion Construction v The Guinness Trust*,[42] a case where the point in issue was whether delay should be measured from the Date for Completion or from the contractor's programmed date which preceded it. The point was of some importance because of the related question whether the contractor could claim prolongation costs from the programmed date from completion, which was before the Date for Completion. The court found that the delays, and hence claims for prolongation costs, should run from the Date for Completion. It is suggested, reading the passage as a whole, that the point being addressed in *Keating* is that quantification of the loss should be addressed in two stages. First, liability will only arise if, and to the extent that, delays extend the works past the date for completion. Second, when the period of delay past the date of completion is known, the loss should be quantified during the period when the additional costs were incurred, rather than after the completion date.

After debate, the court in *Ascon* accepted valuation of the loss at the point of the delay.[43] The claim in *Costain* was also made on this basis, and experts agreed amounts on the same basis, without apparent criticism from the court.

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38 Davison and Mullen, note 26, page 180.
39 See for example Trickey and Hackett, note 25, paragraph 4.6.2.
40 Mastrandrea, note 27, pages 458-459.
41 *Keating*, note 3, paragraph 19-264.
42 *Glenlion Construction Ltd v The Guinness Trust* (1987) 39 BLR 89 (QB).
43 *Ascon Contracting*, note 5, paragraph 43.

Hence, although occasional references in decisions are made to costs 'in the extended period' it is suggested that quantification of the loss should best be carried out at the date of the delay, when the additional costs were incurred.

Costain v Haswell: a departure from established principles

In *Costain* the amount of prolongation costs per week, described as 'site-wide overheads', was agreed between experts. The judge held that in the absence of proof that delaying events had affected the entire site, and not affected just the two buildings with defective foundations, the claim for prolongation costs failed.

It is clear that the court was troubled by a claim for site-wide overheads in a claim where delays to just two of the ten buildings were involved:

> '… in order to recover substantial damages, the contractor needs to show what losses he has incurred as a result of the prolongation of the activity in question. Those losses will include the increased and additional costs of carrying out the delayed activity itself as well as the additional costs caused to other site activities as a result of the delaying event. *But the contractor will not recover the general site overheads of carrying out all the activities on site as a matter of course unless he can establish that the delaying event to one activity in fact impacted on all the other site activities*. Simply because the delaying event itself is on the critical path does not mean that in point of fact it impacted on any other site activity save for those immediately following and dependent upon the activities in question.'[44] [*emphasis added*]

On this basis, the judge concluded:

> '… no evidence has been called to establish that the delaying events in question in fact caused delay to any activities on site apart from the RGF and IW buildings. That being so, it follows, in my judgment, that the prolongation claim advanced by Costain based on recovery of the whole of the site costs of the Lostock site, fails for want of proof.' [45]

Later, he made the same point when applying the principle described above to the facts of the case:

> 'Costain has not called any evidence to show the relationship on site between the activity involving the RGF and the IW and the other activities going on at the same time or thereafter. It is known that there were 10 structures to be built on the Lostock site of which the RGF and IW buildings were two. There is no reason to suppose that, as a matter of course, progress on the other eight structures would be affected by delays to the RGF and IW. … *If therefore, as seems likely, the other activities on the site were continuing regardless of the delays to the RGF and IW buildings, then there is no basis upon which it can be argued that Costain can recover the whole of its costs of maintaining the Lostock site simply as a result of delays to one part of that site*.

44 *Costain v Haswell*, note 1, paragraph [184].
45 *Costain v Haswell*, note 1, paragraph [185].

> Since Costain is seeking to recover the totality of its site costs during the period October 2002 - January 2003, in my judgment, it follows that *this claim must fail in the absence of evidence showing that, during that period, all the activities on the site were being delayed by delays to the RGF and IW*. In the absence of that evidence, the only proper basis of claim left to Costain would be to show what were the prolonged site and overhead costs referable only to the RGF and IW buildings which had been incurred over the period of delay. That would be a perfectly legitimate basis of claim.' [46] [*emphasis added*]

The central proposition here is that to recover site-wide overhead costs the contractor must prove that *all* activities being carried out at that time were affected. This, it is suggested, is questionable and requires closer analysis. It might be noted at the outset that the judge's views were reached without reference to authority and, indeed, without any reference to the established principles of valuation based on time-related resources alone.

It is submitted that the judge's approach is difficult to follow, because it seeks to measure the loss by the extent to which site overheads claimed relate to activities on site that are being delayed. The better approach is simply to ask which losses are incurred by virtue of the delays being incurred: that is most easily achieved by focusing on the additional time-related site overheads. Focusing on these overheads would also have been consistent with the valuation principles already established.

Viewed another way, the judge suggested that a link between time-related losses and other activities underway at the time was necessary to recover the losses in issue: this should not have been necessary. It is correct that volume-related site overhead costs should be excluded when the amount due in respect of time-related losses is calculated, but the performance on site of concurrent activities should not go to reduce those losses generated by time. The judge may have fallen into error in not making that distinction clearer. In *Costain*, the claimant's case to recover the site overheads was said to fail for want of proof that all site activities were delayed. A better rationalisation of this outcome may be that the costs claimed were a mix of time-related and volume-related costs; that those costs (unlike *Ascon*) were indistinguishable; so no view could be achieved on the time-related amount alone, hence on the amount due as damages.

Two examples

Take first a project to build a road, which is critical work, beside which there was to be a fence erected under the same contract, which was not directly dependent upon progress of the road, and therefore not critical. If, mid-project, the entire project was suspended for a month, it is clear that all site overheads would be affected by the delay in question. The prolongation costs might be assessed as being the site overheads incurred through that month of delay, together with loss of contribution to head office costs and possibly

46 *Costain v Haswell*, note 1, paragraph [236].

some other claims such as winter working, increased costs, additional cost to complete due to changes in method or resource planning.

Second, take the same project where progress of work to the road was delayed for a month due to the need for deeper foundations in one part. The progress of fencing beside the road, meanwhile, is unaffected and might be completed much as planned. As a result of the delays to the road, the entire site management team, together with the site accommodation, all of which are required to stay to the end of the project, are retained for an additional month, mid-project, on account of the road-related delays. As a matter of causation, once it is shown that each or any of the general site overheads is affected by the delay to one or more elements of work (the road, in this example), there seems no logical need to prove also, as a precondition of recovery, that every other site activity (such as the fence in this example) was also necessarily affected. It would, in fact, be most illogical if a claimant was to prove overhead costs as having arisen from delays to one activity that delayed the date for completion, only to be denied recovery due to failure to prove that other activities were affected.

What emerges from these examples is the need to address evaluation of the cost of delay in three stages:

1. Identify when the delay occurred and what period of time was involved;
2. Identify the time-related losses, excluding those fixed costs and those generated primarily by volume caused by the delay; and
3. Of the remaining volume-related losses, identify whether any arise directly from the delay events in a way that they might be identified separately from a claim for additional site overheads.

More simply, the overall question to be addressed is: what losses were incurred as a result of the delaying event?

Conclusions

Losses arising from prolongation may be wide-ranging in nature and will not always be limited to a contractor's claims for additional site overheads. Agreements to compensate based on estimates of site overheads may not always provide a good approximation of the extent of losses incurred. The decision in *Costain v Haswell* provides, as an overriding point, a reminder that the claimant must prove it has incurred a loss. Hence, no loss arises where the claimant has already recovered its losses from another party.

As *Costain* highlights, when the claim for delay-related losses arises in an action for damages (such as in a professional negligence action), failure to prove that delays and losses were actually incurred can be fatal to a claim for damages. But requiring the claimant to prove that delays at an early stage of a contract in fact resulted in delays to completion is perhaps questionable, as inconsistent with the principle that delays accrue incrementally. After proof that delays were in fact incurred, the loss should be measured at the point in

time in which the delay event arose, rather than costs incurred at the end of contract, a point endorsed in *Costain*.

Where a claim for additional site overheads is made, the established principle is that the loss is the total of time-related costs incurred in respect of resources (typically, site overheads) which, because of the delaying event, were (or were likely to be) detained on site for a longer period.

In a claim for such additional site overheads, *Costain* suggests that the claimant must also prove that all activities across the site were delayed by the overheads involved. This, it is suggested, departs from the established principle of valuation based on time-related costs incurred; it is questionable whether this basis would result in an accurate valuation of the losses. The suggestion made in *Costain* that deductions should be made from the time-related losses on account of those non-critical works would, if correct, result in claimants not being properly compensated for the time-related consequences of delays. Further, the suggestion made in *Costain* that a claim for additional site overheads cannot succeed unless it is shown that *all* activities on the site were delayed is based on the premise that the site overhead costs incurred at that time were a function of work being performed on site at that time. Adopting that premise fails to acknowledge that some costs are primarily incurred as a function of time, and therefore fails to compensate such time-related losses arising from events which have taken place.

In valuing prolongation costs, the decision in *Costain* therefore provides a useful reminder of the importance of distinguishing between costs generated by time and by volume. The test to apply in evaluating time-related losses, it is submitted, is a simple one: what losses were generated as a result of the delaying event? The link between the event and the losses claimed may not always be immediately obvious. The losses may arise from delays to completion of the works as a whole and, in so doing, reflect time-related losses arising from the event, even if other events proceed without delay. Claimants who leave these matters unexplained do so at their peril.

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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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