

A Formula For Success

John B Molloy, LLB(Hons), BSc(Hons), FHKIS, FRICS, FInstCES, MCIArb, RPS(QS), Managing Director, James R Knowles (Hong Kong) Limited

One of the principal elements of a claim for loss and expense or costs due to the prolongation of the works is a claim for the costs of head office overheads. Such claims are made under two quite distinct bases, either an actual cost approach or a lost opportunity approach.

The lost opportunity approach is made on the premise that because of the delay the contractor's organization is unable to move on to another project and earn the combined profit and head office overheads of which it is reasonably capable, i.e. the opportunity to earn elsewhere is lost. In the case of **J.F. Finnegan Ltd -v- Sheffield City Council** (1988), Sir William Stabb QC, said:

"It is generally accepted that, on principle, a contractor who is delayed in completing a contract due to the default of his employer, may properly have a claim for head office or off-site overheads during the period of delay, on the basis that the work-force, but for the delay, might have had the opportunity of being employed on another contract which would have had the effect of funding the overheads during the overrun period."

The actual cost approach is simply the identification and cost of the head office overheads affected by the delay.

The lost opportunity approach is by far the most popular with contractors, for two reasons. Firstly, because the actual costs are so difficult to identify and prove, and secondly, because the lost opportunity approach uses a formula for its calculation.

Contractors love to use a formula to calculate head office overhead costs and it is easy to see why. A formula calculation is simple, cheap, quick and produces a

reasonable sum of money for very little effort.

There are two formulae commonly used for such calculations, the Hudson's formula and the Emden formula. Hudson's formula was first produced by Mr. Duncan Wallace (purportedly upon the advice of a quantity surveyor) and published in Hudson's Building and Engineering Contracts. Hudson's formula is:

$$\frac{\text{Head Office Overhead Percentage}^1}{100} \times \frac{\text{Contract Sum}}{\text{Contract Period}} \times \text{Period of Delay}$$

1 The Head Office Overhead percentage in the Contract

and it has received judicial support in a number of cases (sometimes erroneously - see below) and in particular in *Ellis-Don Ltd -v- The Parking Authority of Toronto* (1978).

The formula is criticised by many principally because it adopts the head office overhead percentage from the contract as the factor for calculating the costs, and this may bear little or no relation to the actual head office costs of the contractor.

¹ The Head Office Overhead percentage in the Contract

In an attempt to improve upon the Hudson's formula an alternative was published in Emden's Building Contracts and Practice. Emden's formula is:

$$\frac{\text{Head Office Overhead Percentage}^2}{100} \times \frac{\text{Contract Sum}}{\text{Contract Period}} \times \text{Period of Delay}$$

2 The HO/Profit percentage is head office percentage, arrived at by dividing the total overhead cost and profit of the Contractor's organization as a whole by the total turnover.

This formula has the advantage of using the contractor's actual head office/ profit percentage rather than the one contained in the contract and has received judicial support in a number of cases, notably but somewhat obliquely in Finnegan where Sir William Stabb QC, said:

"However, I confess that I consider the plaintiffs' method of calculation of the overheads on the basis of a notional contract valued by uplifting the value of the direct cost by the constant of 3.51 as being too speculative and I infinitely prefer the Hudson formula which, in my judgment, is the right one to apply in this case, that is to say, overhead and profit percentage based upon a fair annual average, multiplied by the contract sum and the period of delay in weeks, divided by the contract period. Ó Sir William obviously did not fully understand the formula he was using because the percentage based upon actual head office costs is of course Emden's and not Hudson's formula."

These two formulae were used for many years until the use of formula, and indeed the opportunity costs approach in general fell out of favour following the (non construction) case of **Tate & Lyle v GLC**

² The HO/Profit percentage is head office percentage, arrived at by dividing the total overhead cost and profit of the Contractor's organization as a whole by the total turnover.

[1983] where the court would not accept a calculation of head office overheads based upon a simple percentage, and stated that it was necessary to prove actual additional costs incurred rather than a hypothetical loss of opportunity approach.

Many felt that this case sounded the death knell for head office overhead claims based upon the loss of opportunity approach and in particular by the use of simple formula.

However, the difficulties of proving the actual additional costs incurred in respect of head office overheads (and possibly of judges in assessing them) have recently led to the courts taking a more relaxed view of the degree of proof necessary to prove that the delay had caused the contractor to lose the opportunity to fully earn its head office overheads elsewhere, and in a number of cases claims using the loss of opportunity approach and a formula are re-appearing.

For example in **Norwest Holst Construction Ltd. v Co-operative Wholesale Society** (1989), the court accepted that the arbitrator had been correct to use an Emden formula, albeit with a significantly reduced percentage to assess the contractor's head office costs.

Further in the very recent Scottish case of **Beechwood Development Company (Scotland) Limited v Stuart Mitchell** (2001) the judge accepted the use of a formula which he considered to be the Hudson's formula, but which was again a mistake because the actual formula used was Emden.

So there seems to be a swing back to accepting the use of Hudson's or Emden's formulae for the assessment of head office overheads, provided of course the contractor can prove that due to the delay he has in some way lost the opportunity to fully earn the head office overheads on other projects.

Where the loss of opportunity cannot be proven, and an actual cost approach is necessary there is however a formula that may be appropriate. This formula is the American Eichleay formula and it is one, which I have personally found very useful recently. This formula is calculated by comparing the value of work carried out in the contract period for the project with the value of work carried out by the contractor as a whole for the contract period. A share of head office overheads for the contractor can then be allocated in the same ratio and expressed as a lump sum to the particular contract. The amount of head office overhead allocated to the particular contract is then expressed as a weekly amount by dividing it by the contract period. The period of delay can then be multiplied by the weekly amount to give a total sum claimed. The **Eichleay formula** is thus:

$$\frac{\text{Value of work during Contract Period}}{\text{Total value of work For Company as a whole During Contract period}} \times \frac{\text{Total Head Office Overhead during contract Period}}{\text{Total Head Office Overhead during contract Period}}$$

= Total Head Office Overheads during contract Period

$$\text{Head Office Overhead} \times \frac{\text{Allocated to the Contract}}{\text{Contract period}} \times \text{Period of Delay}$$

= Amount Claimed

The formula looks complicated, but is not and was recently used (but not named) in the case of **Property and Land Contractors Ltd -v- Alfred McAlpine Homes North Ltd** (1997) where the court accepted the plaintiff's claim for the recovery of head office overheads actually expended calculated using such a formula.

So the use of formula to calculate head office overheads is not dead, Hudson's or probably better Emden's formula can be used where the contractor can prove some lost opportunity to recover contributions to head office overheads from other projects, and Eichleay can be used where a claim based on actual costs is more appropriate.

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